



## **SpectraLink 11 Mb/s NetLink Phone**

**Assy # 93-162-04**

### **11 Mb/s Jammer Margin Testing**

#### ***Introduction***

The FCC rules require testing of Processing Gain for our 11 Mb/s NetLink phones. The applicable rules are:

47 CFR Ch. I § 15.247

(e) The processing gain of a direct sequence system shall be at least 10 dB. The processing gain represents the improvement to the received signal-to-noise ratio, after filtering to the information bandwidth, from the spreading/despreading function. The processing gain may be determined using one of the following methods:

(1) As measured at the demodulated output of the receiver: the ratio in dB of the signal-to-noise ratio with the system spreading code turned off to the signal-to-noise ratio with the system spreading code turned on.

(2) As measured using the CW jamming margin method: a signal generator is stepped in 50 kHz increments across the passband of the system, recording at each point the generator level required to produce the recommended Bit Error Rate (BER). This level is the jammer level. The output power of the intentional radiator is measured at the same point. The jammer to signal ratio (J/S) is then calculated, discarding the worst 20% of the J/S data points. The lowest remaining J/S ratio is used to calculate the processing gain, as follows:  $G_p = (S/N)_o + M_j + L_{sys}$ , where  $G_p$  = processing gain of the system,  $(S/N)_o$  = signal to noise ratio required for the chosen BER,  $M_j = J/S$  ratio, and  $L_{sys}$  = system losses. Note that total losses in a system, including intentional radiator and receiver, should be assumed to be no more than 2 dB.

The product is based on the Intersil Prism chipset which has been demonstrated to pass the FCC processing gain tests.

## ***Procedure***

The unit was tested according to procedure (2) (CW Jamming Margin Method). The block diagram of the test setup is shown in Figure 1.

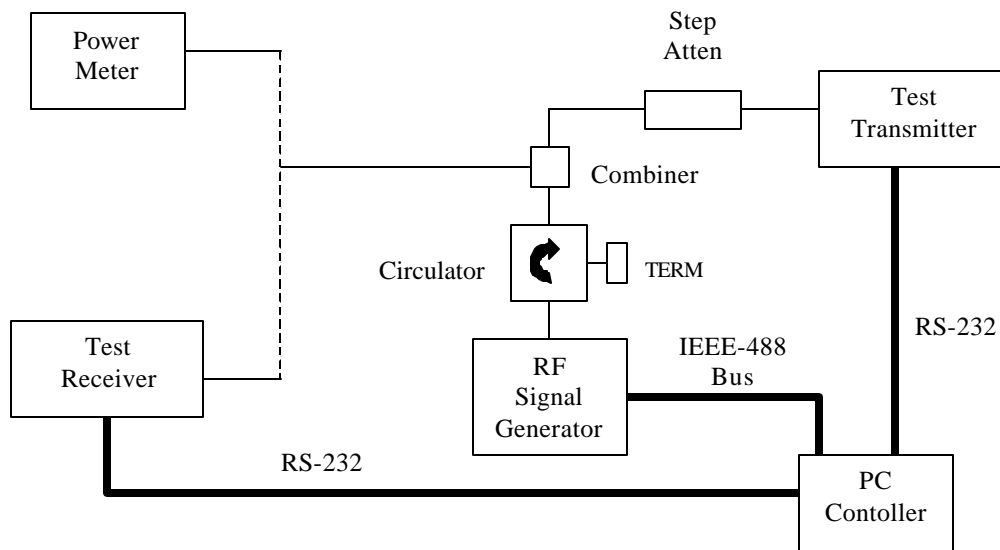


Fig. 1. Block Diagram of Test Setup

The Test Transmitter consists of an 11 Mb/s Netlink phone operating in a continuous packet transmit mode. The Test Receiver is an 11 Mb/s Netlink phone operating with special test code that reports received errors. A PC equipped with an IEEE-488 interface card was used to control both the RF Signal Generator (over the IEEE-488 interface) and the Netlink phones (over the RS-232 serial ports). The test code modes for the transmitter allowed for continuously transmitting a packet of information at a user specified rate (1, 2, 5.5 or 11 Mb/s). The step attenuator was adjusted to give approximately -50 dBm output power from the Test Transmitter at the Test Receiver. The test was performed on channel 6 (2437 MHz).

A special test routine was written for the PC to automate the collection of data. The routine went through each frequency offset across the band ( $\pm 8$  MHz) and measured the jammer RF level required to generate  $>3.2\%$  PER (see Appendix F). The jammer RF level was set to a resolution of 0.1 dB. The frequency and jammer RF level was written to a file for further processing in a spreadsheet.

The power meter was used in a separate calibration measurement to account for the additional losses caused by the jammer combining network and to determine the transmitter output power. This was later applied to the raw collected data in the spreadsheet.

And finally, the actual processing gain was calculated based on the formula:

$$G_p = \left\{ \frac{S}{N} \right\}_o + M_j + L_{sys}$$

Where:  $G_p$  is the Processing Gain (in dB)  
 $(S/N)_o$  is the required output Signal-to-Noise ratio for sensitivity (in dB)  
 $M_j$  is the Jammer-to-Signal ratio (in dB)  
 $L_{sys}$  is the allowed system implementation losses (in dB)  
Note:  $L_{sys}$  is limited to 2dB.

The  $(S/N)_o$  value depends on the modulation rate that the test is run at. The values used for this test are:

1 Mb/s	10.3 dB
2 Mb/s	13.3 dB
5.5 Mb/s	13.7 dB
11 Mb/s	17.0 dB

These values are based on documents provided by Intersil with reference to their Prism chip set detailing required S/N values as well as justification of the coding gain present in 5.5 and 11 Mb/s mode.

#### References:

1. "Testing for compliance with FCC rules 15-247e", Carl Andren, Intersil Corporation, January 11, 2000
2. Intersil WLAN PC Card, Model No: HWB3163, FCC ID: OSZ3163B1, Engineering Test Report - Appendix B, November 17, 1999
3. FCC Processing Gain report of 2.4 GHz WLAN Access point, Intersil, Model ISL36356A-SB, FCC ID: OSZ36356A2

### ***Test Equipment Used***

Test Transmitter	SpectraLink 93-0162-04B S/N: 610030702
Test Receiver	SpectraLink 93-0162-04C S/N: 610030698
RF Signal Generator	HP E4421B
RF Spectrum Analyzer	HP 8560B
Power Combiner	MiniCircuits ZESC-2-11
Circulator	Narda 4923 w/ SMA termination
Step Attenuator	Kay 839
Power Meter	HP EPM-441A w/ ECP-E18A Sensor

## *Summary of Results*

Ch #6 @ 1 Mb/s

$$\begin{aligned}(S/N)_o &= 10.3 \text{ dB} \\ M_j &= 2.1 \text{ dB (at 20th percentile)} \\ L_{\text{sys}} &= 2.0 \text{ dB} \\ G_p &= 14.4 \text{ dB}\end{aligned}$$

Ch #6 @ 2 Mb/s

$$\begin{aligned}(S/N)_o &= 13.3 \text{ dB} \\ M_j &= -0.3 \text{ dB (at 20th percentile)} \\ L_{\text{sys}} &= 2.0 \text{ dB} \\ G_p &= 15.0 \text{ dB}\end{aligned}$$

Ch #6 @ 5.5 Mb/s

$$\begin{aligned}(S/N)_o &= 13.7 \text{ dB} \\ M_j &= -2.3 \text{ dB (at 20th percentile)} \\ L_{\text{sys}} &= 2.0 \text{ dB} \\ G_p &= 13.4 \text{ dB}\end{aligned}$$

Ch #6 @ 11 Mb/s

$$\begin{aligned}(S/N)_o &= 17.0 \text{ dB} \\ M_j &= -7.5 \text{ dB (at 20th percentile)} \\ L_{\text{sys}} &= 2.0 \text{ dB} \\ G_p &= 11.5 \text{ dB}\end{aligned}$$

The unit passes the required 10 dB requirement for all four transmission rates.

## *Appendices*

Appendix A: Measured Data Ch #6 1 Mb/s

Appendix B: Measured Data Ch #6 2 Mb/s

Appendix C: Measured Data Ch #6 5.5 Mb/s

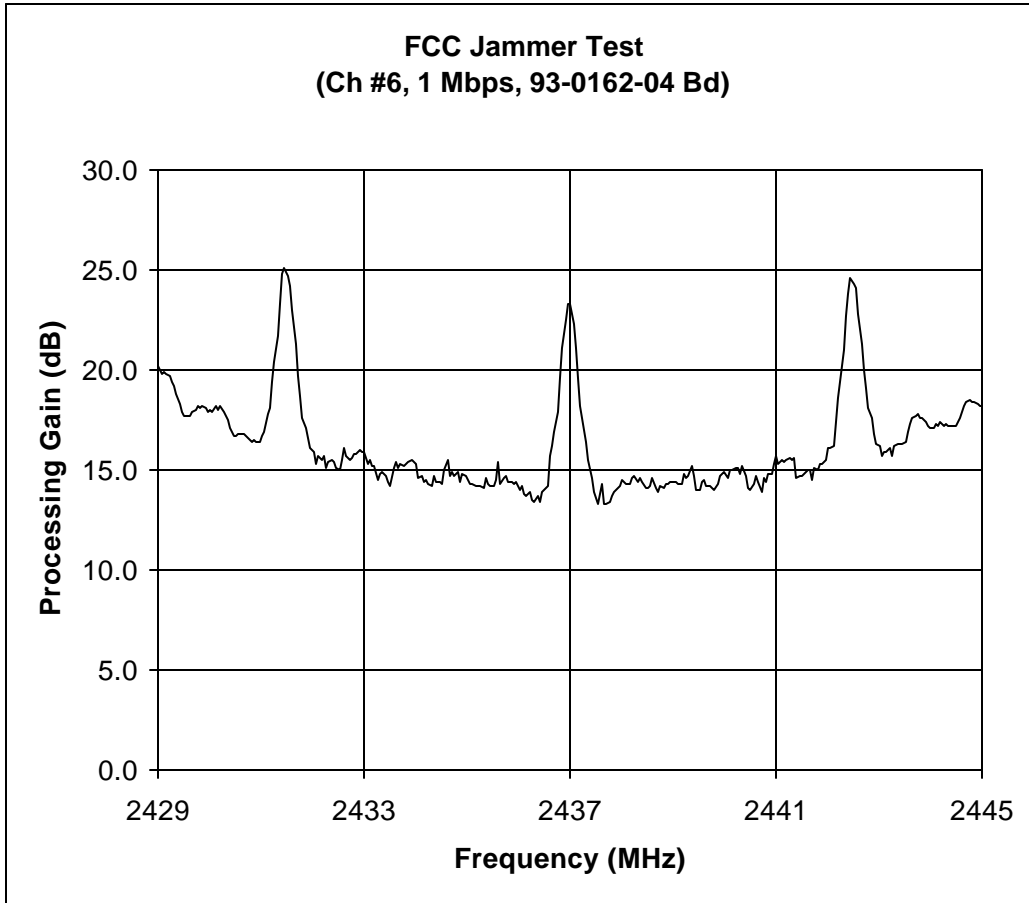
Appendix D: Measured Data Ch #6 11 Mb/s

Appendix E: Calibration Measurement

Appendix F: Converting between Bit Error Rate and Packet Error Rate

Appendix A: Measured Data Ch #6 1 Mb/s

(S/N)<sub>o</sub> = 10.3 dB  
 M<sub>j</sub> = 2.1 dB @ 20th Percentile  
 L<sub>sys</sub> = 2 dB  
 G<sub>p</sub> = 14.4 dB



610030698, Auto, simplex measurement, 162-04 xmtr. 1Mb/s, Estimated BER s/w

Freq	Raw XMIT RF Level	Raw S.G. RF Level	Corrected XMIT RF Level	Corrected S.G. RF Level	M <sub>j</sub> = J/S	G <sub>p</sub> = (S/N) <sub>o</sub> + M <sub>j</sub> + L <sub>sys</sub>
2429.000	-51.1	-38.0	-51.0	-43.1	7.9	20.2
2429.050	-51.1	-38.4	-51.0	-43.5	7.5	19.8
2429.100	-51.1	-38.3	-51.0	-43.4	7.6	19.9
2429.150	-51.1	-38.4	-51.0	-43.5	7.5	19.8
2429.200	-51.1	-38.5	-51.0	-43.6	7.4	19.7
2429.250	-51.1	-38.8	-51.0	-43.9	7.1	19.4
2429.300	-51.1	-39.0	-51.0	-44.1	6.9	19.2
2429.350	-51.1	-39.4	-51.0	-44.5	6.5	18.8
2429.400	-51.1	-39.9	-51.0	-45.0	6.0	18.3

2429.450	-51.1	-40.3	-51.0	-45.4	5.6	17.9
2429.500	-51.1	-40.5	-51.0	-45.6	5.4	17.7
2429.550	-51.1	-40.5	-51.0	-45.6	5.4	17.7
2429.600	-51.1	-40.5	-51.0	-45.6	5.4	17.7
2429.650	-51.1	-40.3	-51.0	-45.4	5.6	17.9
2429.700	-51.1	-40.2	-51.0	-45.3	5.7	18.0
2429.750	-51.1	-40.0	-51.0	-45.1	5.9	18.2
2429.800	-51.1	-40.1	-51.0	-45.2	5.8	18.1
2429.850	-51.1	-40.0	-51.0	-45.1	5.9	18.2
2429.900	-51.1	-40.1	-51.0	-45.2	5.8	18.1
2429.950	-51.1	-40.3	-51.0	-45.4	5.6	17.9
2430.000	-51.1	-40.2	-51.0	-45.3	5.7	18.0
2430.050	-51.1	-40.3	-51.0	-45.4	5.6	17.9
2430.100	-51.1	-40.0	-51.0	-45.1	5.9	18.2
2430.150	-51.1	-40.2	-51.0	-45.3	5.7	18.0
2430.200	-51.1	-40.0	-51.0	-45.1	5.9	18.2
2430.250	-51.1	-40.3	-51.0	-45.4	5.6	17.9
2430.300	-51.1	-40.5	-51.0	-45.6	5.4	17.7
2430.350	-51.1	-40.7	-51.0	-45.8	5.2	17.5
2430.400	-51.1	-41.1	-51.0	-46.2	4.8	17.1
2430.450	-51.1	-41.5	-51.0	-46.6	4.4	16.7
2430.500	-51.1	-41.5	-51.0	-46.6	4.4	16.7
2430.550	-51.1	-41.4	-51.0	-46.5	4.5	16.8
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2430.750	-51.1	-41.6	-51.0	-46.7	4.3	16.6
2430.800	-51.1	-41.8	-51.0	-46.9	4.1	16.4
2430.850	-51.1	-41.7	-51.0	-46.8	4.2	16.5
2430.900	-51.1	-41.8	-51.0	-46.9	4.1	16.4
2430.950	-51.1	-41.8	-51.0	-46.9	4.1	16.4
2431.000	-51.1	-41.5	-51.0	-46.6	4.4	16.7
2431.050	-51.1	-41.3	-51.0	-46.4	4.6	16.9
2431.100	-51.1	-40.4	-51.0	-45.5	5.5	17.8
2431.150	-51.1	-40.1	-51.0	-45.2	5.8	18.1
2431.200	-51.1	-38.8	-51.0	-43.9	7.1	19.4
2431.250	-51.1	-37.8	-51.0	-42.9	8.1	20.4
2431.300	-51.1	-36.5	-51.0	-41.6	9.4	21.7
2431.350	-51.1	-34.9	-51.0	-40.0	11.0	23.3
2431.400	-51.1	-33.4	-51.0	-38.5	12.5	24.8
2431.450	-51.1	-33.1	-51.0	-38.2	12.8	25.1
2431.500	-51.1	-33.5	-51.0	-38.6	12.4	24.7
2431.550	-51.1	-34.0	-51.0	-39.1	11.9	24.2
2431.600	-51.1	-35.2	-51.0	-40.3	10.7	23.0
2431.650	-51.1	-36.9	-51.0	-42.0	9.0	21.3
2431.700	-51.1	-38.5	-51.0	-43.6	7.4	19.7
2431.750	-51.1	-39.5	-51.0	-44.6	6.4	18.7
2431.800	-51.1	-40.6	-51.0	-45.7	5.3	17.6
2431.850	-51.1	-41.1	-51.0	-46.2	4.8	17.1
2431.900	-51.1	-41.6	-51.0	-46.7	4.3	16.6
2431.950	-51.1	-42.1	-51.0	-47.2	3.8	16.1
2432.000	-51.1	-42.3	-51.0	-47.4	3.6	15.9

2432.050	-51.1	-42.9	-51.0	-48.0	3.0	15.3
2432.100	-51.1	-42.5	-51.0	-47.6	3.4	15.7
2432.150	-51.1	-42.7	-51.0	-47.8	3.2	15.5
2432.200	-51.1	-42.5	-51.0	-47.6	3.4	15.7
2432.250	-51.1	-43.1	-51.0	-48.2	2.8	15.1
2432.300	-51.1	-42.8	-51.0	-47.9	3.1	15.4
2432.350	-51.1	-42.7	-51.0	-47.8	3.2	15.5
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2432.950	-51.1	-42.3	-51.0	-47.4	3.6	15.9
2433.000	-51.1	-42.3	-51.0	-47.4	3.6	15.9
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2433.950	-51.1	-42.8	-51.0	-47.9	3.1	15.4
2434.000	-51.1	-42.9	-51.0	-48.0	3.0	15.3
2434.050	-51.1	-43.6	-51.0	-48.7	2.3	14.6
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2434.500	-51.1	-43.9	-51.0	-49.0	2.0	14.3
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2434.750	-51.1	-43.5	-51.0	-48.6	2.4	14.7
2434.800	-51.1	-43.3	-51.0	-48.4	2.6	14.9
2434.850	-51.1	-43.8	-51.0	-48.9	2.1	14.4
2434.900	-51.1	-43.4	-51.0	-48.5	2.5	14.8
2434.950	-51.1	-43.5	-51.0	-48.6	2.4	14.7
2435.000	-51.1	-43.7	-51.0	-48.8	2.2	14.5
2435.050	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2435.100	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2435.150	-51.1	-44.0	-51.0	-49.1	1.9	14.2
2435.200	-51.1	-44.0	-51.0	-49.1	1.9	14.2
2435.250	-51.1	-44.0	-51.0	-49.1	1.9	14.2
2435.300	-51.1	-44.1	-51.0	-49.2	1.8	14.1
2435.350	-51.1	-43.6	-51.0	-48.7	2.3	14.6
2435.400	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2435.450	-51.1	-44.0	-51.0	-49.1	1.9	14.2
2435.500	-51.1	-44.0	-51.0	-49.1	1.9	14.2
2435.550	-51.1	-43.7	-51.0	-48.8	2.2	14.5
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2435.900	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2435.950	-51.1	-43.8	-51.0	-48.9	2.1	14.4
2436.000	-51.1	-44.2	-51.0	-49.3	1.7	14.0
2436.050	-51.1	-44.0	-51.0	-49.1	1.9	14.2
2436.100	-51.1	-44.4	-51.0	-49.5	1.5	13.8
2436.150	-51.1	-44.5	-51.0	-49.6	1.4	13.7
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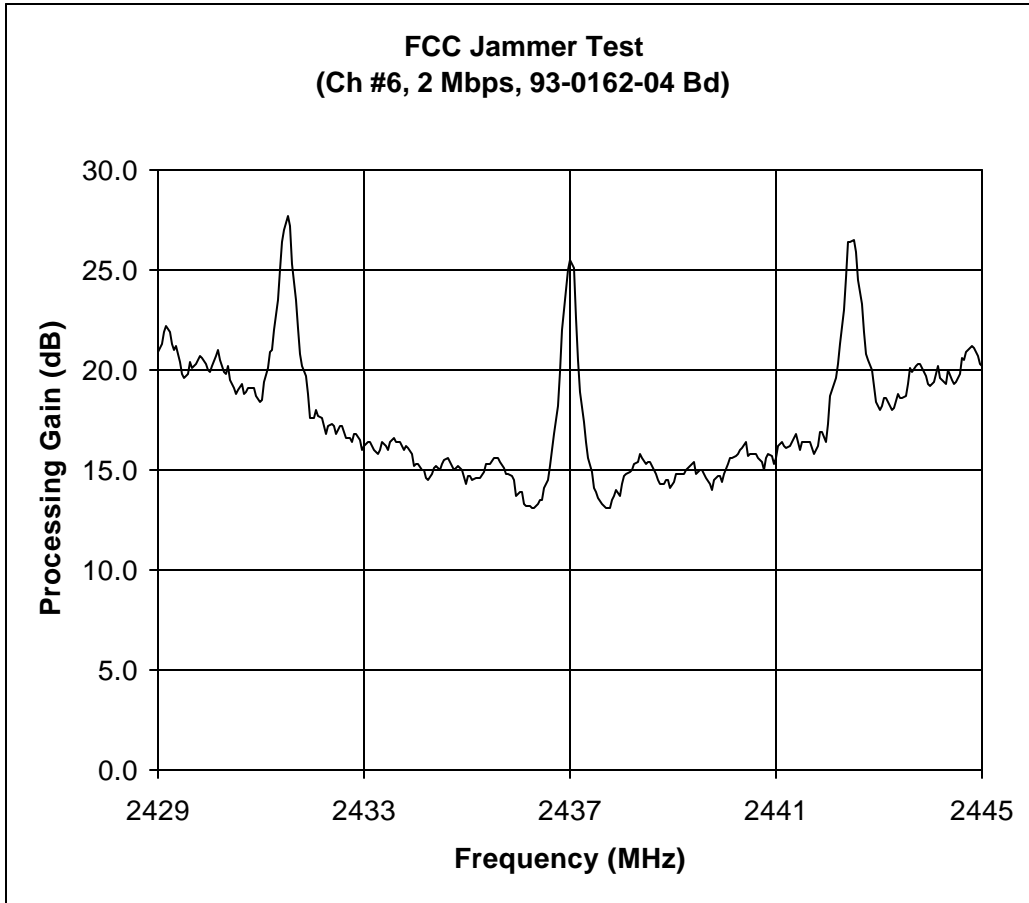
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2437.600	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2437.650	-51.1	-44.9	-51.0	-50.0	1.0	13.3
2437.700	-51.1	-44.9	-51.0	-50.0	1.0	13.3
2437.750	-51.1	-44.8	-51.0	-49.9	1.1	13.4
2437.800	-51.1	-44.5	-51.0	-49.6	1.4	13.7
2437.850	-51.1	-44.3	-51.0	-49.4	1.6	13.9
2437.900	-51.1	-44.2	-51.0	-49.3	1.7	14.0
2437.950	-51.1	-44.0	-51.0	-49.1	1.9	14.2
2438.000	-51.1	-43.7	-51.0	-48.8	2.2	14.5
2438.050	-51.1	-43.8	-51.0	-48.9	2.1	14.4
2438.100	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2438.150	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2438.200	-51.1	-43.6	-51.0	-48.7	2.3	14.6
2438.250	-51.1	-43.5	-51.0	-48.6	2.4	14.7
2438.300	-51.1	-43.8	-51.0	-48.9	2.1	14.4
2438.350	-51.1	-43.6	-51.0	-48.7	2.3	14.6
2438.400	-51.1	-43.8	-51.0	-48.9	2.1	14.4
2438.450	-51.1	-44.1	-51.0	-49.2	1.8	14.1
2438.500	-51.1	-44.1	-51.0	-49.2	1.8	14.1
2438.550	-51.1	-44.0	-51.0	-49.1	1.9	14.2
2438.600	-51.1	-43.6	-51.0	-48.7	2.3	14.6
2438.650	-51.1	-44.1	-51.0	-49.2	1.8	14.1
2438.700	-51.1	-44.3	-51.0	-49.4	1.6	13.9
2438.750	-51.1	-44.0	-51.0	-49.1	1.9	14.2
2438.800	-51.1	-44.1	-51.0	-49.2	1.8	14.1
2438.850	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2438.900	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2438.950	-51.1	-43.8	-51.0	-48.9	2.1	14.4
2439.000	-51.1	-43.8	-51.0	-48.9	2.1	14.4
2439.050	-51.1	-43.8	-51.0	-48.9	2.1	14.4
2439.100	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2439.150	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2439.200	-51.1	-43.4	-51.0	-48.5	2.5	14.8
2439.250	-51.1	-43.6	-51.0	-48.7	2.3	14.6
2439.300	-51.1	-43.5	-51.0	-48.6	2.4	14.7
2439.350	-51.1	-43.0	-51.0	-48.1	2.9	15.2
2439.400	-51.1	-43.5	-51.0	-48.6	2.4	14.7
2439.450	-51.1	-44.2	-51.0	-49.3	1.7	14.0
2439.500	-51.1	-44.2	-51.0	-49.3	1.7	14.0
2439.550	-51.1	-43.8	-51.0	-48.9	2.1	14.4
2439.600	-51.1	-43.7	-51.0	-48.8	2.2	14.5
2439.650	-51.1	-44.0	-51.0	-49.1	1.9	14.2
2439.700	-51.1	-44.0	-51.0	-49.1	1.9	14.2
2439.750	-51.1	-44.1	-51.0	-49.2	1.8	14.1
2439.800	-51.1	-44.2	-51.0	-49.3	1.7	14.0

2439.850	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2439.900	-51.1	-43.5	-51.0	-48.6	2.4	14.7
2439.950	-51.1	-43.4	-51.0	-48.5	2.5	14.8
2440.000	-51.1	-43.3	-51.0	-48.4	2.6	14.9
2440.050	-51.1	-43.6	-51.0	-48.7	2.3	14.6
2440.100	-51.1	-43.2	-51.0	-48.3	2.7	15.0
2440.150	-51.1	-43.2	-51.0	-48.3	2.7	15.0
2440.200	-51.1	-43.1	-51.0	-48.2	2.8	15.1
2440.250	-51.1	-43.1	-51.0	-48.2	2.8	15.1
2440.300	-51.1	-43.4	-51.0	-48.5	2.5	14.8
2440.350	-51.1	-43.0	-51.0	-48.1	2.9	15.2
2440.400	-51.1	-43.5	-51.0	-48.6	2.4	14.7
2440.450	-51.1	-44.1	-51.0	-49.2	1.8	14.1
2440.500	-51.1	-44.2	-51.0	-49.3	1.7	14.0
2440.550	-51.1	-43.9	-51.0	-49.0	2.0	14.3
2440.600	-51.1	-43.5	-51.0	-48.6	2.4	14.7
2440.650	-51.1	-43.8	-51.0	-48.9	2.1	14.4
2440.700	-51.1	-44.3	-51.0	-49.4	1.6	13.9
2440.750	-51.1	-43.6	-51.0	-48.7	2.3	14.6
2440.800	-51.1	-43.8	-51.0	-48.9	2.1	14.4
2440.850	-51.1	-43.4	-51.0	-48.5	2.5	14.8
2440.900	-51.1	-43.4	-51.0	-48.5	2.5	14.8
2440.950	-51.1	-42.9	-51.0	-48.0	3.0	15.3
2441.000	-51.1	-42.5	-51.0	-47.6	3.4	15.7
2441.050	-51.1	-42.9	-51.0	-48.0	3.0	15.3
2441.100	-51.1	-42.7	-51.0	-47.8	3.2	15.5
2441.150	-51.1	-42.8	-51.0	-47.9	3.1	15.4
2441.200	-51.1	-42.7	-51.0	-47.8	3.2	15.5
2441.250	-51.1	-42.6	-51.0	-47.7	3.3	15.6
2441.300	-51.1	-42.7	-51.0	-47.8	3.2	15.5
2441.350	-51.1	-42.6	-51.0	-47.7	3.3	15.6
2441.400	-51.1	-43.6	-51.0	-48.7	2.3	14.6
2441.450	-51.1	-43.5	-51.0	-48.6	2.4	14.7
2441.500	-51.1	-43.5	-51.0	-48.6	2.4	14.7
2441.550	-51.1	-43.4	-51.0	-48.5	2.5	14.8
2441.600	-51.1	-43.2	-51.0	-48.3	2.7	15.0
2441.650	-51.1	-43.2	-51.0	-48.3	2.7	15.0
2441.700	-51.1	-43.7	-51.0	-48.8	2.2	14.5
2441.750	-51.1	-43.1	-51.0	-48.2	2.8	15.1
2441.800	-51.1	-43.2	-51.0	-48.3	2.7	15.0
2441.850	-51.1	-42.9	-51.0	-48.0	3.0	15.3
2441.900	-51.1	-42.9	-51.0	-48.0	3.0	15.3
2441.950	-51.1	-42.7	-51.0	-47.8	3.2	15.5
2442.000	-51.1	-42.1	-51.0	-47.2	3.8	16.1
2442.050	-51.1	-42.1	-51.0	-47.2	3.8	16.1
2442.100	-51.1	-42.0	-51.0	-47.1	3.9	16.2
2442.150	-51.1	-40.8	-51.0	-45.9	5.1	17.4
2442.200	-51.1	-39.6	-51.0	-44.7	6.3	18.6
2442.250	-51.1	-38.8	-51.0	-43.9	7.1	19.4
2442.300	-51.1	-37.2	-51.0	-42.3	8.7	21.0
2442.350	-51.1	-35.5	-51.0	-40.6	10.4	22.7
2442.400	-51.1	-34.4	-51.0	-39.5	11.5	23.8

2442.450	-51.1	-33.6	-51.0	-38.7	12.3	24.6
2442.500	-51.1	-33.9	-51.0	-39.0	12.0	24.3
2442.550	-51.1	-34.1	-51.0	-39.2	11.8	24.1
2442.600	-51.1	-35.4	-51.0	-40.5	10.5	22.8
2442.650	-51.1	-36.9	-51.0	-42.0	9.0	21.3
2442.700	-51.1	-38.2	-51.0	-43.3	7.7	20.0
2442.750	-51.1	-39.1	-51.0	-44.2	6.8	19.1
2442.800	-51.1	-40.1	-51.0	-45.2	5.8	18.1
2442.850	-51.1	-40.6	-51.0	-45.7	5.3	17.6
2442.900	-51.1	-41.4	-51.0	-46.5	4.5	16.8
2442.950	-51.1	-41.9	-51.0	-47.0	4.0	16.3
2443.000	-51.1	-42.0	-51.0	-47.1	3.9	16.2
2443.050	-51.1	-42.5	-51.0	-47.6	3.4	15.7
2443.100	-51.1	-42.3	-51.0	-47.4	3.6	15.9
2443.150	-51.1	-42.3	-51.0	-47.4	3.6	15.9
2443.200	-51.1	-42.1	-51.0	-47.2	3.8	16.1
2443.250	-51.1	-42.5	-51.0	-47.6	3.4	15.7
2443.300	-51.1	-42.0	-51.0	-47.1	3.9	16.2
2443.350	-51.1	-41.9	-51.0	-47.0	4.0	16.3
2443.400	-51.1	-41.9	-51.0	-47.0	4.0	16.3
2443.450	-51.1	-41.9	-51.0	-47.0	4.0	16.3
2443.500	-51.1	-41.8	-51.0	-46.9	4.1	16.4
2443.550	-51.1	-41.3	-51.0	-46.4	4.6	16.9
2443.600	-51.1	-40.9	-51.0	-46.0	5.0	17.3
2443.650	-51.1	-40.6	-51.0	-45.7	5.3	17.6
2443.700	-51.1	-40.5	-51.0	-45.6	5.4	17.7
2443.750	-51.1	-40.4	-51.0	-45.5	5.5	17.8
2443.800	-51.1	-40.6	-51.0	-45.7	5.3	17.6
2443.850	-51.1	-40.6	-51.0	-45.7	5.3	17.6
2443.900	-51.1	-40.8	-51.0	-45.9	5.1	17.4
2443.950	-51.1	-41.0	-51.0	-46.1	4.9	17.2
2444.000	-51.1	-41.1	-51.0	-46.2	4.8	17.1
2444.050	-51.1	-41.1	-51.0	-46.2	4.8	17.1
2444.100	-51.1	-40.9	-51.0	-46.0	5.0	17.3
2444.150	-51.1	-41.0	-51.0	-46.1	4.9	17.2
2444.200	-51.1	-40.8	-51.0	-45.9	5.1	17.4
2444.250	-51.1	-41.0	-51.0	-46.1	4.9	17.2
2444.300	-51.1	-40.9	-51.0	-46.0	5.0	17.3
2444.350	-51.1	-41.0	-51.0	-46.1	4.9	17.2
2444.400	-51.1	-41.0	-51.0	-46.1	4.9	17.2
2444.450	-51.1	-41.0	-51.0	-46.1	4.9	17.2
2444.500	-51.1	-41.0	-51.0	-46.1	4.9	17.2
2444.550	-51.1	-40.6	-51.0	-45.7	5.3	17.6
2444.600	-51.1	-40.3	-51.0	-45.4	5.6	17.9
2444.650	-51.1	-40.0	-51.0	-45.1	5.9	18.2
2444.700	-51.1	-39.8	-51.0	-44.9	6.1	18.4
2444.750	-51.1	-39.7	-51.0	-44.8	6.2	18.5
2444.800	-51.1	-39.8	-51.0	-44.9	6.1	18.4
2444.850	-51.1	-39.8	-51.0	-44.9	6.1	18.4
2444.900	-51.1	-39.9	-51.0	-45.0	6.0	18.3
2444.950	-51.1	-40.0	-51.0	-45.1	5.9	18.2
2445.000	-51.1	-40.0	-51.0	-45.1	5.9	18.2

Appendix B: Measured Data Ch #6 2 Mb/s

(S/N)<sub>o</sub> = 13.3 dB  
 M<sub>j</sub> = -0.3 dB @ 20th Percentile  
 L<sub>sys</sub> = 2 dB  
 G<sub>p</sub> = 15.0 dB



610030698, Auto, simplex measurement, 162-04 xmtr. 2Mb/s, Estimated BER s/w

Freq	Raw XMIT RF Level	Raw S.G. RF Level	Corrected XMIT RF Level	Corrected S.G. RF Level	M <sub>j</sub> = J/S	G <sub>p</sub> = (S/N) <sub>o</sub> + M <sub>j</sub> + L <sub>sys</sub>
2429.000	-51.2	-40.3	-51.1	-45.4	5.7	21.0
2429.050	-51.2	-39.9	-51.1	-45.0	6.1	21.4
2429.100	-51.2	-39.3	-51.1	-44.4	6.7	22.0
2429.150	-51.2	-39.0	-51.1	-44.1	7.0	22.3
2429.200	-51.2	-39.3	-51.1	-44.4	6.7	22.0
2429.250	-51.2	-39.9	-51.1	-45.0	6.1	21.4
2429.300	-51.2	-40.2	-51.1	-45.3	5.8	21.1
2429.350	-51.2	-40.0	-51.1	-45.1	6.0	21.3
2429.400	-51.2	-40.8	-51.1	-45.9	5.2	20.5

2429.450	-51.2	-41.4	-51.1	-46.5	4.6	19.9
2429.500	-51.2	-41.6	-51.1	-46.7	4.4	19.7
2429.550	-51.2	-41.4	-51.1	-46.5	4.6	19.9
2429.600	-51.2	-40.8	-51.1	-45.9	5.2	20.5
2429.650	-51.2	-41.1	-51.1	-46.2	4.9	20.2
2429.700	-51.2	-40.9	-51.1	-46.0	5.1	20.4
2429.750	-51.2	-40.7	-51.1	-45.8	5.3	20.6
2429.800	-51.2	-40.5	-51.1	-45.6	5.5	20.8
2429.850	-51.2	-40.6	-51.1	-45.7	5.4	20.7
2429.900	-51.2	-40.9	-51.1	-46.0	5.1	20.4
2429.950	-51.2	-41.2	-51.1	-46.3	4.8	20.1
2430.000	-51.2	-41.3	-51.1	-46.4	4.7	20.0
2430.050	-51.2	-41.0	-51.1	-46.1	5.0	20.3
2430.100	-51.2	-40.5	-51.1	-45.6	5.5	20.8
2430.150	-51.2	-40.2	-51.1	-45.3	5.8	21.1
2430.200	-51.2	-40.7	-51.1	-45.8	5.3	20.6
2430.250	-51.2	-41.3	-51.1	-46.4	4.7	20.0
2430.300	-51.2	-41.4	-51.1	-46.5	4.6	19.9
2430.350	-51.2	-41.0	-51.1	-46.1	5.0	20.3
2430.400	-51.2	-41.7	-51.1	-46.8	4.3	19.6
2430.450	-51.2	-42.1	-51.1	-47.2	3.9	19.2
2430.500	-51.2	-42.4	-51.1	-47.5	3.6	18.9
2430.550	-51.2	-42.2	-51.1	-47.3	3.8	19.1
2430.600	-51.2	-41.9	-51.1	-47.0	4.1	19.4
2430.650	-51.2	-42.4	-51.1	-47.5	3.6	18.9
2430.700	-51.2	-42.3	-51.1	-47.4	3.7	19.0
2430.750	-51.2	-42.1	-51.1	-47.2	3.9	19.2
2430.800	-51.2	-42.1	-51.1	-47.2	3.9	19.2
2430.850	-51.2	-42.1	-51.1	-47.2	3.9	19.2
2430.900	-51.2	-42.5	-51.1	-47.6	3.5	18.8
2430.950	-51.2	-42.8	-51.1	-47.9	3.2	18.5
2431.000	-51.2	-42.7	-51.1	-47.8	3.3	18.6
2431.050	-51.2	-41.8	-51.1	-46.9	4.2	19.5
2431.100	-51.2	-41.1	-51.1	-46.2	4.9	20.2
2431.150	-51.2	-40.3	-51.1	-45.4	5.7	21.0
2431.200	-51.2	-40.2	-51.1	-45.3	5.8	21.1
2431.250	-51.2	-39.2	-51.1	-44.3	6.8	22.1
2431.300	-51.2	-37.7	-51.1	-42.8	8.3	23.6
2431.350	-51.2	-36.2	-51.1	-41.3	9.8	25.1
2431.400	-51.2	-34.8	-51.1	-39.9	11.2	26.5
2431.450	-51.2	-34.2	-51.1	-39.3	11.8	27.1
2431.500	-51.2	-33.5	-51.1	-38.6	12.5	27.8
2431.550	-51.2	-34.0	-51.1	-39.1	12.0	27.3
2431.600	-51.2	-35.9	-51.1	-41.0	10.1	25.4
2431.650	-51.2	-37.7	-51.1	-42.8	8.3	23.6
2431.700	-51.2	-39.1	-51.1	-44.2	6.9	22.2
2431.750	-51.2	-40.4	-51.1	-45.5	5.6	20.9
2431.800	-51.2	-41.0	-51.1	-46.1	5.0	20.3
2431.850	-51.2	-41.5	-51.1	-46.6	4.5	19.8
2431.900	-51.2	-42.4	-51.1	-47.5	3.6	18.9
2431.950	-51.2	-43.6	-51.1	-48.7	2.4	17.7
2432.000	-51.2	-43.7	-51.1	-48.8	2.3	17.6

2432.050	-51.2	-43.2	-51.1	-48.3	2.8	18.1
2432.100	-51.2	-43.5	-51.1	-48.6	2.5	17.8
2432.150	-51.2	-43.7	-51.1	-48.8	2.3	17.6
2432.200	-51.2	-44.0	-51.1	-49.1	2.0	17.3
2432.250	-51.2	-44.4	-51.1	-49.5	1.6	16.9
2432.300	-51.2	-44.1	-51.1	-49.2	1.9	17.2
2432.350	-51.2	-43.9	-51.1	-49.0	2.1	17.4
2432.400	-51.2	-44.0	-51.1	-49.1	2.0	17.3
2432.450	-51.2	-44.4	-51.1	-49.5	1.6	16.9
2432.500	-51.2	-44.1	-51.1	-49.2	1.9	17.2
2432.550	-51.2	-44.1	-51.1	-49.2	1.9	17.2
2432.600	-51.2	-44.3	-51.1	-49.4	1.7	17.0
2432.650	-51.2	-44.6	-51.1	-49.7	1.4	16.7
2432.700	-51.2	-44.6	-51.1	-49.7	1.4	16.7
2432.750	-51.2	-44.9	-51.1	-50.0	1.1	16.4
2432.800	-51.2	-44.4	-51.1	-49.5	1.6	16.9
2432.850	-51.2	-44.5	-51.1	-49.6	1.5	16.8
2432.900	-51.2	-44.7	-51.1	-49.8	1.3	16.6
2432.950	-51.2	-45.2	-51.1	-50.3	0.8	16.1
2433.000	-51.2	-45.0	-51.1	-50.1	1.0	16.3
2433.050	-51.2	-44.8	-51.1	-49.9	1.2	16.5
2433.100	-51.2	-44.9	-51.1	-50.0	1.1	16.4
2433.150	-51.2	-45.0	-51.1	-50.1	1.0	16.3
2433.200	-51.2	-45.2	-51.1	-50.3	0.8	16.1
2433.250	-51.2	-45.4	-51.1	-50.5	0.6	15.9
2433.300	-51.2	-45.2	-51.1	-50.3	0.8	16.1
2433.350	-51.2	-44.9	-51.1	-50.0	1.1	16.4
2433.400	-51.2	-45.0	-51.1	-50.1	1.0	16.3
2433.450	-51.2	-45.2	-51.1	-50.3	0.8	16.1
2433.500	-51.2	-44.8	-51.1	-49.9	1.2	16.5
2433.550	-51.2	-44.6	-51.1	-49.7	1.4	16.7
2433.600	-51.2	-44.8	-51.1	-49.9	1.2	16.5
2433.650	-51.2	-44.9	-51.1	-50.0	1.1	16.4
2433.700	-51.2	-44.8	-51.1	-49.9	1.2	16.5
2433.750	-51.2	-45.2	-51.1	-50.3	0.8	16.1
2433.800	-51.2	-45.0	-51.1	-50.1	1.0	16.3
2433.850	-51.2	-45.1	-51.1	-50.2	0.9	16.2
2433.900	-51.2	-45.4	-51.1	-50.5	0.6	15.9
2433.950	-51.2	-46.0	-51.1	-51.1	0.0	15.3
2434.000	-51.2	-45.9	-51.1	-51.0	0.1	15.4
2434.050	-51.2	-45.9	-51.1	-51.0	0.1	15.4
2434.100	-51.2	-46.2	-51.1	-51.3	-0.2	15.1
2434.150	-51.2	-46.2	-51.1	-51.3	-0.2	15.1
2434.200	-51.2	-46.6	-51.1	-51.7	-0.6	14.7
2434.250	-51.2	-46.7	-51.1	-51.8	-0.7	14.6
2434.300	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2434.350	-51.2	-46.1	-51.1	-51.2	-0.1	15.2
2434.400	-51.2	-46.0	-51.1	-51.1	0.0	15.3
2434.450	-51.2	-46.2	-51.1	-51.3	-0.2	15.1
2434.500	-51.2	-45.9	-51.1	-51.0	0.1	15.4
2434.550	-51.2	-45.7	-51.1	-50.8	0.3	15.6
2434.600	-51.2	-45.6	-51.1	-50.7	0.4	15.7

2434.650	-51.2	-45.8	-51.1	-50.9	0.2	15.5
2434.700	-51.2	-46.0	-51.1	-51.1	0.0	15.3
2434.750	-51.2	-46.2	-51.1	-51.3	-0.2	15.1
2434.800	-51.2	-46.0	-51.1	-51.1	0.0	15.3
2434.850	-51.2	-46.1	-51.1	-51.2	-0.1	15.2
2434.900	-51.2	-46.2	-51.1	-51.3	-0.2	15.1
2434.950	-51.2	-46.9	-51.1	-52.0	-0.9	14.4
2435.000	-51.2	-46.5	-51.1	-51.6	-0.5	14.8
2435.050	-51.2	-46.5	-51.1	-51.6	-0.5	14.8
2435.100	-51.2	-46.7	-51.1	-51.8	-0.7	14.6
2435.150	-51.2	-46.6	-51.1	-51.7	-0.6	14.7
2435.200	-51.2	-46.6	-51.1	-51.7	-0.6	14.7
2435.250	-51.2	-46.6	-51.1	-51.7	-0.6	14.7
2435.300	-51.2	-46.3	-51.1	-51.4	-0.3	15.0
2435.350	-51.2	-45.9	-51.1	-51.0	0.1	15.4
2435.400	-51.2	-45.9	-51.1	-51.0	0.1	15.4
2435.450	-51.2	-45.9	-51.1	-51.0	0.1	15.4
2435.500	-51.2	-45.6	-51.1	-50.7	0.4	15.7
2435.550	-51.2	-45.6	-51.1	-50.7	0.4	15.7
2435.600	-51.2	-45.6	-51.1	-50.7	0.4	15.7
2435.650	-51.2	-45.8	-51.1	-50.9	0.2	15.5
2435.700	-51.2	-46.1	-51.1	-51.2	-0.1	15.2
2435.750	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2435.800	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2435.850	-51.2	-46.5	-51.1	-51.6	-0.5	14.8
2435.900	-51.2	-46.7	-51.1	-51.8	-0.7	14.6
2435.950	-51.2	-47.5	-51.1	-52.6	-1.5	13.8
2436.000	-51.2	-47.4	-51.1	-52.5	-1.4	13.9
2436.050	-51.2	-47.4	-51.1	-52.5	-1.4	13.9
2436.100	-51.2	-47.9	-51.1	-53.0	-1.9	13.4
2436.150	-51.2	-48.0	-51.1	-53.1	-2.0	13.3
2436.200	-51.2	-48.0	-51.1	-53.1	-2.0	13.3
2436.250	-51.2	-48.2	-51.1	-53.3	-2.2	13.1
2436.300	-51.2	-48.2	-51.1	-53.3	-2.2	13.1
2436.350	-51.2	-47.9	-51.1	-53.0	-1.9	13.4
2436.400	-51.2	-47.7	-51.1	-52.8	-1.7	13.6
2436.450	-51.2	-47.7	-51.1	-52.8	-1.7	13.6
2436.500	-51.2	-47.1	-51.1	-52.2	-1.1	14.2
2436.550	-51.2	-46.7	-51.1	-51.8	-0.7	14.6
2436.600	-51.2	-46.0	-51.1	-51.1	0.0	15.3
2436.650	-51.2	-45.3	-51.1	-50.4	0.7	16.0
2436.700	-51.2	-44.4	-51.1	-49.5	1.6	16.9
2436.750	-51.2	-43.0	-51.1	-48.1	3.0	18.3
2436.800	-51.2	-41.3	-51.1	-46.4	4.7	20.0
2436.850	-51.2	-39.2	-51.1	-44.3	6.8	22.1
2436.900	-51.2	-37.2	-51.1	-42.3	8.8	24.1
2436.950	-51.2	-36.2	-51.1	-41.3	9.8	25.1
2437.000	-51.2	-35.7	-51.1	-40.8	10.3	25.6
2437.050	-51.2	-36.1	-51.1	-41.2	9.9	25.2
2437.100	-51.2	-38.6	-51.1	-43.7	7.4	22.7
2437.150	-51.2	-40.7	-51.1	-45.8	5.3	20.6
2437.200	-51.2	-42.3	-51.1	-47.4	3.7	19.0



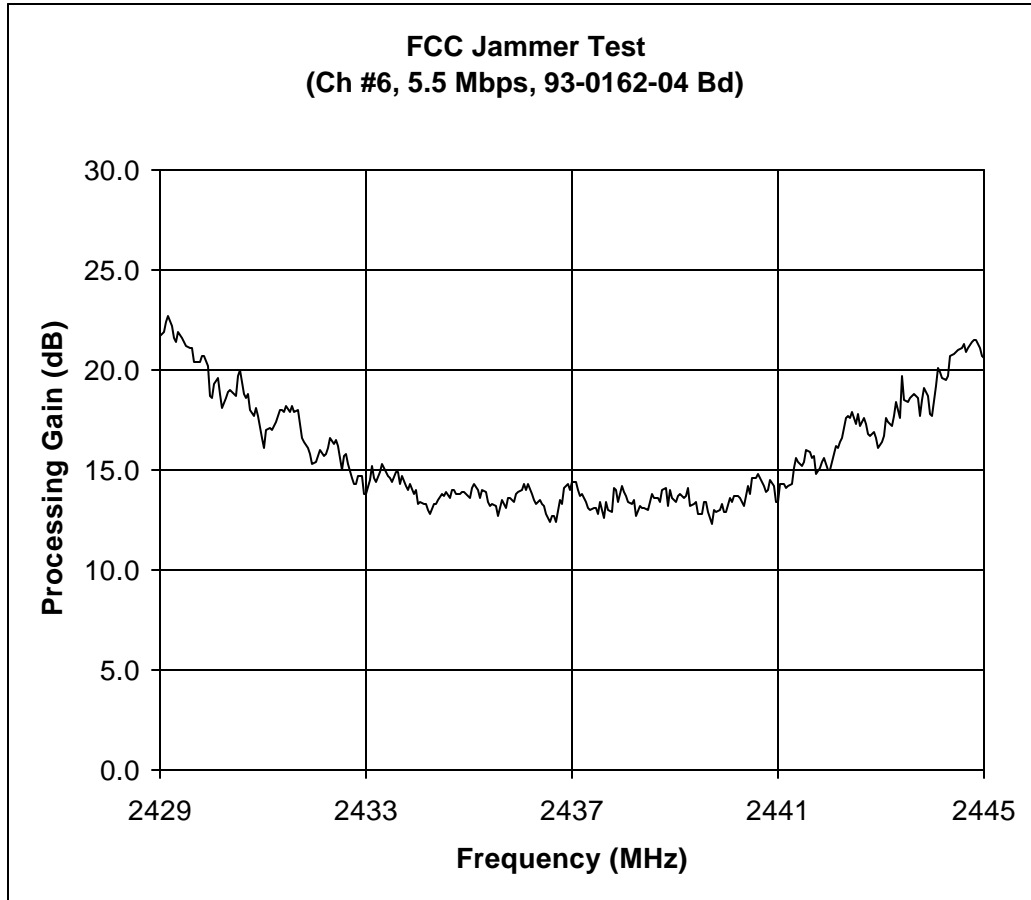
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2437.300	-51.2	-44.9	-51.1	-50.0	1.1	16.4
2437.350	-51.2	-45.6	-51.1	-50.7	0.4	15.7
2437.400	-51.2	-46.3	-51.1	-51.4	-0.3	15.0
2437.450	-51.2	-47.1	-51.1	-52.2	-1.1	14.2
2437.500	-51.2	-47.3	-51.1	-52.4	-1.3	14.0
2437.550	-51.2	-47.6	-51.1	-52.7	-1.6	13.7
2437.600	-51.2	-47.9	-51.1	-53.0	-1.9	13.4
2437.650	-51.2	-48.0	-51.1	-53.1	-2.0	13.3
2437.700	-51.2	-48.2	-51.1	-53.3	-2.2	13.1
2437.750	-51.2	-48.2	-51.1	-53.3	-2.2	13.1
2437.800	-51.2	-47.7	-51.1	-52.8	-1.7	13.6
2437.850	-51.2	-47.5	-51.1	-52.6	-1.5	13.8
2437.900	-51.2	-47.2	-51.1	-52.3	-1.2	14.1
2437.950	-51.2	-47.5	-51.1	-52.6	-1.5	13.8
2438.000	-51.2	-47.0	-51.1	-52.1	-1.0	14.3
2438.050	-51.2	-46.5	-51.1	-51.6	-0.5	14.8
2438.100	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2438.150	-51.2	-46.3	-51.1	-51.4	-0.3	15.0
2438.200	-51.2	-46.2	-51.1	-51.3	-0.2	15.1
2438.250	-51.2	-45.9	-51.1	-51.0	0.1	15.4
2438.300	-51.2	-45.8	-51.1	-50.9	0.2	15.5
2438.350	-51.2	-45.4	-51.1	-50.5	0.6	15.9
2438.400	-51.2	-45.6	-51.1	-50.7	0.4	15.7
2438.450	-51.2	-45.9	-51.1	-51.0	0.1	15.4
2438.500	-51.2	-45.8	-51.1	-50.9	0.2	15.5
2438.550	-51.2	-45.8	-51.1	-50.9	0.2	15.5
2438.600	-51.2	-46.0	-51.1	-51.1	0.0	15.3
2438.650	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2438.700	-51.2	-46.7	-51.1	-51.8	-0.7	14.6
2438.750	-51.2	-46.9	-51.1	-52.0	-0.9	14.4
2438.800	-51.2	-46.9	-51.1	-52.0	-0.9	14.4
2438.850	-51.2	-46.7	-51.1	-51.8	-0.7	14.6
2438.900	-51.2	-46.7	-51.1	-51.8	-0.7	14.6
2438.950	-51.2	-47.1	-51.1	-52.2	-1.1	14.2
2439.000	-51.2	-46.8	-51.1	-51.9	-0.8	14.5
2439.050	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2439.100	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2439.150	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2439.200	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2439.250	-51.2	-46.2	-51.1	-51.3	-0.2	15.1
2439.300	-51.2	-46.1	-51.1	-51.2	-0.1	15.2
2439.350	-51.2	-45.9	-51.1	-51.0	0.1	15.4
2439.400	-51.2	-45.8	-51.1	-50.9	0.2	15.5
2439.450	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2439.500	-51.2	-46.2	-51.1	-51.3	-0.2	15.1
2439.550	-51.2	-46.2	-51.1	-51.3	-0.2	15.1
2439.600	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2439.650	-51.2	-46.6	-51.1	-51.7	-0.6	14.7
2439.700	-51.2	-46.9	-51.1	-52.0	-0.9	14.4
2439.750	-51.2	-47.2	-51.1	-52.3	-1.2	14.1
2439.800	-51.2	-46.7	-51.1	-51.8	-0.7	14.6

2439.850	-51.2	-46.5	-51.1	-51.6	-0.5	14.8
2439.900	-51.2	-46.5	-51.1	-51.6	-0.5	14.8
2439.950	-51.2	-46.8	-51.1	-51.9	-0.8	14.5
2440.000	-51.2	-46.4	-51.1	-51.5	-0.4	14.9
2440.050	-51.2	-45.9	-51.1	-51.0	0.1	15.4
2440.100	-51.2	-45.6	-51.1	-50.7	0.4	15.7
2440.150	-51.2	-45.6	-51.1	-50.7	0.4	15.7
2440.200	-51.2	-45.5	-51.1	-50.6	0.5	15.8
2440.250	-51.2	-45.4	-51.1	-50.5	0.6	15.9
2440.300	-51.2	-45.3	-51.1	-50.4	0.7	16.0
2440.350	-51.2	-45.1	-51.1	-50.2	0.9	16.2
2440.400	-51.2	-44.8	-51.1	-49.9	1.2	16.5
2440.450	-51.2	-45.5	-51.1	-50.6	0.5	15.8
2440.500	-51.2	-45.4	-51.1	-50.5	0.6	15.9
2440.550	-51.2	-45.4	-51.1	-50.5	0.6	15.9
2440.600	-51.2	-45.4	-51.1	-50.5	0.6	15.9
2440.650	-51.2	-45.6	-51.1	-50.7	0.4	15.7
2440.700	-51.2	-45.8	-51.1	-50.9	0.2	15.5
2440.750	-51.2	-46.2	-51.1	-51.3	-0.2	15.1
2440.800	-51.2	-45.6	-51.1	-50.7	0.4	15.7
2440.850	-51.2	-45.4	-51.1	-50.5	0.6	15.9
2440.900	-51.2	-45.5	-51.1	-50.6	0.5	15.8
2440.950	-51.2	-45.9	-51.1	-51.0	0.1	15.4
2441.000	-51.2	-45.6	-51.1	-50.7	0.4	15.7
2441.050	-51.2	-45.0	-51.1	-50.1	1.0	16.3
2441.100	-51.2	-44.9	-51.1	-50.0	1.1	16.4
2441.150	-51.2	-45.0	-51.1	-50.1	1.0	16.3
2441.200	-51.2	-45.1	-51.1	-50.2	0.9	16.2
2441.250	-51.2	-45.0	-51.1	-50.1	1.0	16.3
2441.300	-51.2	-44.9	-51.1	-50.0	1.1	16.4
2441.350	-51.2	-44.6	-51.1	-49.7	1.4	16.7
2441.400	-51.2	-44.5	-51.1	-49.6	1.5	16.8
2441.450	-51.2	-45.3	-51.1	-50.4	0.7	16.0
2441.500	-51.2	-44.9	-51.1	-50.0	1.1	16.4
2441.550	-51.2	-44.8	-51.1	-49.9	1.2	16.5
2441.600	-51.2	-44.8	-51.1	-49.9	1.2	16.5
2441.650	-51.2	-44.8	-51.1	-49.9	1.2	16.5
2441.700	-51.2	-45.1	-51.1	-50.2	0.9	16.2
2441.750	-51.2	-45.4	-51.1	-50.5	0.6	15.9
2441.800	-51.2	-45.0	-51.1	-50.1	1.0	16.3
2441.850	-51.2	-44.3	-51.1	-49.4	1.7	17.0
2441.900	-51.2	-44.3	-51.1	-49.4	1.7	17.0
2441.950	-51.2	-44.8	-51.1	-49.9	1.2	16.5
2442.000	-51.2	-43.9	-51.1	-49.0	2.1	17.4
2442.050	-51.2	-42.5	-51.1	-47.6	3.5	18.8
2442.100	-51.2	-41.9	-51.1	-47.0	4.1	19.4
2442.150	-51.2	-41.6	-51.1	-46.7	4.4	19.7
2442.200	-51.2	-40.9	-51.1	-46.0	5.1	20.4
2442.250	-51.2	-39.9	-51.1	-45.0	6.1	21.4
2442.300	-51.2	-38.2	-51.1	-43.3	7.8	23.1
2442.350	-51.2	-36.6	-51.1	-41.7	9.4	24.7
2442.400	-51.2	-34.8	-51.1	-39.9	11.2	26.5

2442.450	-51.2	-34.8	-51.1	-39.9	11.2	26.5
2442.500	-51.2	-34.7	-51.1	-39.8	11.3	26.6
2442.550	-51.2	-35.3	-51.1	-40.4	10.7	26.0
2442.600	-51.2	-36.7	-51.1	-41.8	9.3	24.6
2442.650	-51.2	-37.9	-51.1	-43.0	8.1	23.4
2442.700	-51.2	-39.3	-51.1	-44.4	6.7	22.0
2442.750	-51.2	-40.4	-51.1	-45.5	5.6	20.9
2442.800	-51.2	-40.7	-51.1	-45.8	5.3	20.6
2442.850	-51.2	-41.2	-51.1	-46.3	4.8	20.1
2442.900	-51.2	-42.0	-51.1	-47.1	4.0	19.3
2442.950	-51.2	-42.8	-51.1	-47.9	3.2	18.5
2443.000	-51.2	-43.2	-51.1	-48.3	2.8	18.1
2443.050	-51.2	-43.0	-51.1	-48.1	3.0	18.3
2443.100	-51.2	-42.6	-51.1	-47.7	3.4	18.7
2443.150	-51.2	-42.6	-51.1	-47.7	3.4	18.7
2443.200	-51.2	-43.0	-51.1	-48.1	3.0	18.3
2443.250	-51.2	-43.2	-51.1	-48.3	2.8	18.1
2443.300	-51.2	-43.1	-51.1	-48.2	2.9	18.2
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2443.450	-51.2	-42.6	-51.1	-47.7	3.4	18.7
2443.500	-51.2	-42.5	-51.1	-47.6	3.5	18.8
2443.550	-51.2	-41.9	-51.1	-47.0	4.1	19.4
2443.600	-51.2	-41.1	-51.1	-46.2	4.9	20.2
2443.650	-51.2	-41.3	-51.1	-46.4	4.7	20.0
2443.700	-51.2	-41.0	-51.1	-46.1	5.0	20.3
2443.750	-51.2	-40.9	-51.1	-46.0	5.1	20.4
2443.800	-51.2	-40.9	-51.1	-46.0	5.1	20.4
2443.850	-51.2	-41.1	-51.1	-46.2	4.9	20.2
2443.900	-51.2	-41.5	-51.1	-46.6	4.5	19.8
2443.950	-51.2	-41.9	-51.1	-47.0	4.1	19.4
2444.000	-51.2	-42.0	-51.1	-47.1	4.0	19.3
2444.050	-51.2	-41.8	-51.1	-46.9	4.2	19.5
2444.100	-51.2	-41.4	-51.1	-46.5	4.6	19.9
2444.150	-51.2	-41.0	-51.1	-46.1	5.0	20.3
2444.200	-51.2	-41.6	-51.1	-46.7	4.4	19.7
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2444.300	-51.2	-41.9	-51.1	-47.0	4.1	19.4
2444.350	-51.2	-41.2	-51.1	-46.3	4.8	20.1
2444.400	-51.2	-41.7	-51.1	-46.8	4.3	19.6
2444.450	-51.2	-41.9	-51.1	-47.0	4.1	19.4
2444.500	-51.2	-41.8	-51.1	-46.9	4.2	19.5
2444.550	-51.2	-41.4	-51.1	-46.5	4.6	19.9
2444.600	-51.2	-40.6	-51.1	-45.7	5.4	20.7
2444.650	-51.2	-40.7	-51.1	-45.8	5.3	20.6
2444.700	-51.2	-40.3	-51.1	-45.4	5.7	21.0
2444.750	-51.2	-40.1	-51.1	-45.2	5.9	21.2
2444.800	-51.2	-40.0	-51.1	-45.1	6.0	21.3
2444.850	-51.2	-40.1	-51.1	-45.2	5.9	21.2
2444.900	-51.2	-40.5	-51.1	-45.6	5.5	20.8
2444.950	-51.2	-40.9	-51.1	-46.0	5.1	20.4
2445.000	-51.2	-41.0	-51.1	-46.1	5.0	20.3

Appendix C: Measured Data Ch #6 5.5 Mb/s

(S/N)<sub>o</sub> = 13.7 dB  
 M<sub>j</sub> = -2.3 dB @ 20th Percentile  
 L<sub>sys</sub> = 2 dB  
 G<sub>p</sub> = 13.4 dB



610030698, Auto, simplex measurement, 162-04 xmtr. 5.5Mb/s, Estimated BER s/w

Freq	Raw XMIT RF Level	Raw S.G. RF Level	Corrected XMIT RF Level	Corrected S.G. RF Level	M <sub>j</sub> = J/S	G <sub>p</sub> = (S/N) <sub>o</sub> + M <sub>j</sub> + L <sub>sys</sub>
2429.000	-51.5	-39.9	-51.0	-45.0	6.0	21.7
2429.050	-51.5	-39.7	-51.0	-44.8	6.2	21.9
2429.100	-51.5	-39.2	-51.0	-44.3	6.7	22.4
2429.150	-51.5	-38.9	-51.0	-44.0	7.0	22.7
2429.200	-51.5	-39.4	-51.0	-44.5	6.5	22.2
2429.250	-51.5	-40.0	-51.0	-45.1	5.9	21.6
2429.300	-51.5	-40.2	-51.0	-45.3	5.7	21.4
2429.350	-51.5	-39.7	-51.0	-44.8	6.2	21.9
2429.400	-51.5	-40.0	-51.0	-45.1	5.9	21.6

2429.450	-51.5	-40.2	-51.0	-45.3	5.7	21.4
2429.500	-51.5	-40.4	-51.0	-45.5	5.5	21.2
2429.550	-51.5	-40.5	-51.0	-45.6	5.4	21.1
2429.600	-51.5	-40.5	-51.0	-45.6	5.4	21.1
2429.650	-51.5	-41.2	-51.0	-46.3	4.7	20.4
2429.700	-51.5	-41.2	-51.0	-46.3	4.7	20.4
2429.750	-51.5	-41.2	-51.0	-46.3	4.7	20.4
2429.800	-51.5	-40.9	-51.0	-46.0	5.0	20.7
2429.850	-51.5	-40.9	-51.0	-46.0	5.0	20.7
2429.900	-51.5	-41.4	-51.0	-46.5	4.5	20.2
2429.950	-51.5	-42.9	-51.0	-48.0	3.0	18.7
2430.000	-51.5	-43.0	-51.0	-48.1	2.9	18.6
2430.050	-51.5	-42.3	-51.0	-47.4	3.6	19.3
2430.100	-51.5	-42.0	-51.0	-47.1	3.9	19.6
2430.150	-51.5	-42.8	-51.0	-47.9	3.1	18.8
2430.200	-51.5	-43.5	-51.0	-48.6	2.4	18.1
2430.250	-51.5	-43.0	-51.0	-48.1	2.9	18.6
2430.300	-51.5	-42.7	-51.0	-47.8	3.2	18.9
2430.350	-51.5	-42.6	-51.0	-47.7	3.3	19.0
2430.400	-51.5	-42.7	-51.0	-47.8	3.2	18.9
2430.450	-51.5	-42.9	-51.0	-48.0	3.0	18.7
2430.500	-51.5	-41.9	-51.0	-47.0	4.0	19.7
2430.550	-51.5	-41.6	-51.0	-46.7	4.3	20.0
2430.600	-51.5	-42.8	-51.0	-47.9	3.1	18.8
2430.650	-51.5	-43.0	-51.0	-48.1	2.9	18.6
2430.700	-51.5	-42.8	-51.0	-47.9	3.1	18.8
2430.750	-51.5	-43.6	-51.0	-48.7	2.3	18.0
2430.800	-51.5	-43.9	-51.0	-49.0	2.0	17.7
2430.850	-51.5	-43.5	-51.0	-48.6	2.4	18.1
2430.900	-51.5	-43.9	-51.0	-49.0	2.0	17.7
2430.950	-51.5	-45.0	-51.0	-50.1	0.9	16.6
2431.000	-51.5	-45.5	-51.0	-50.6	0.4	16.1
2431.050	-51.5	-44.6	-51.0	-49.7	1.3	17.0
2431.100	-51.5	-44.5	-51.0	-49.6	1.4	17.1
2431.150	-51.5	-44.6	-51.0	-49.7	1.3	17.0
2431.200	-51.5	-44.4	-51.0	-49.5	1.5	17.2
2431.250	-51.5	-44.2	-51.0	-49.3	1.7	17.4
2431.300	-51.5	-43.6	-51.0	-48.7	2.3	18.0
2431.350	-51.5	-43.6	-51.0	-48.7	2.3	18.0
2431.400	-51.5	-43.7	-51.0	-48.8	2.2	17.9
2431.450	-51.5	-43.4	-51.0	-48.5	2.5	18.2
2431.500	-51.5	-43.7	-51.0	-48.8	2.2	17.9
2431.550	-51.5	-43.4	-51.0	-48.5	2.5	18.2
2431.600	-51.5	-43.7	-51.0	-48.8	2.2	17.9
2431.650	-51.5	-43.6	-51.0	-48.7	2.3	18.0
2431.700	-51.5	-44.3	-51.0	-49.4	1.6	17.3
2431.750	-51.5	-45.0	-51.0	-50.1	0.9	16.6
2431.800	-51.5	-45.2	-51.0	-50.3	0.7	16.4
2431.850	-51.5	-45.5	-51.0	-50.6	0.4	16.1
2431.900	-51.5	-45.8	-51.0	-50.9	0.1	15.8
2431.950	-51.5	-46.3	-51.0	-51.4	-0.4	15.3
2432.000	-51.5	-46.2	-51.0	-51.3	-0.3	15.4

2432.050	-51.5	-45.9	-51.0	-51.0	0.0	15.7
2432.100	-51.5	-45.6	-51.0	-50.7	0.3	16.0
2432.150	-51.5	-45.9	-51.0	-51.0	0.0	15.7
2432.200	-51.5	-45.8	-51.0	-50.9	0.1	15.8
2432.250	-51.5	-45.5	-51.0	-50.6	0.4	16.1
2432.300	-51.5	-45.0	-51.0	-50.1	0.9	16.6
2432.350	-51.5	-45.3	-51.0	-50.4	0.6	16.3
2432.400	-51.5	-45.1	-51.0	-50.2	0.8	16.5
2432.450	-51.5	-45.4	-51.0	-50.5	0.5	16.2
2432.500	-51.5	-46.6	-51.0	-51.7	-0.7	15.0
2432.550	-51.5	-45.9	-51.0	-51.0	0.0	15.7
2432.600	-51.5	-45.8	-51.0	-50.9	0.1	15.8
2432.650	-51.5	-46.3	-51.0	-51.4	-0.4	15.3
2432.700	-51.5	-47.0	-51.0	-52.1	-1.1	14.6
2432.750	-51.5	-47.3	-51.0	-52.4	-1.4	14.3
2432.800	-51.5	-47.3	-51.0	-52.4	-1.4	14.3
2432.850	-51.5	-46.9	-51.0	-52.0	-1.0	14.7
2432.900	-51.5	-46.9	-51.0	-52.0	-1.0	14.7
2432.950	-51.5	-47.8	-51.0	-52.9	-1.9	13.8
2433.000	-51.5	-47.8	-51.0	-52.9	-1.9	13.8
2433.050	-51.5	-47.1	-51.0	-52.2	-1.2	14.5
2433.100	-51.5	-46.4	-51.0	-51.5	-0.5	15.2
2433.150	-51.5	-47.0	-51.0	-52.1	-1.1	14.6
2433.200	-51.5	-47.2	-51.0	-52.3	-1.3	14.4
2433.250	-51.5	-46.7	-51.0	-51.8	-0.8	14.9
2433.300	-51.5	-46.3	-51.0	-51.4	-0.4	15.3
2433.350	-51.5	-46.5	-51.0	-51.6	-0.6	15.1
2433.400	-51.5	-46.9	-51.0	-52.0	-1.0	14.7
2433.450	-51.5	-47.0	-51.0	-52.1	-1.1	14.6
2433.500	-51.5	-47.2	-51.0	-52.3	-1.3	14.4
2433.550	-51.5	-46.7	-51.0	-51.8	-0.8	14.9
2433.600	-51.5	-46.7	-51.0	-51.8	-0.8	14.9
2433.650	-51.5	-47.3	-51.0	-52.4	-1.4	14.3
2433.700	-51.5	-46.9	-51.0	-52.0	-1.0	14.7
2433.750	-51.5	-47.4	-51.0	-52.5	-1.5	14.2
2433.800	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2433.850	-51.5	-47.3	-51.0	-52.4	-1.4	14.3
2433.900	-51.5	-47.8	-51.0	-52.9	-1.9	13.8
2433.950	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2434.000	-51.5	-48.3	-51.0	-53.4	-2.4	13.3
2434.050	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2434.100	-51.5	-48.3	-51.0	-53.4	-2.4	13.3
2434.150	-51.5	-48.3	-51.0	-53.4	-2.4	13.3
2434.200	-51.5	-48.6	-51.0	-53.7	-2.7	13.0
2434.250	-51.5	-48.8	-51.0	-53.9	-2.9	12.8
2434.300	-51.5	-48.3	-51.0	-53.4	-2.4	13.3
2434.350	-51.5	-48.3	-51.0	-53.4	-2.4	13.3
2434.400	-51.5	-48.1	-51.0	-53.2	-2.2	13.5
2434.450	-51.5	-47.8	-51.0	-52.9	-1.9	13.8
2434.500	-51.5	-47.9	-51.0	-53.0	-2.0	13.7
2434.550	-51.5	-47.7	-51.0	-52.8	-1.8	13.9
2434.600	-51.5	-48.0	-51.0	-53.1	-2.1	13.6

2434.650	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2434.700	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2434.750	-51.5	-47.8	-51.0	-52.9	-1.9	13.8
2434.800	-51.5	-47.8	-51.0	-52.9	-1.9	13.8
2434.850	-51.5	-47.7	-51.0	-52.8	-1.8	13.9
2434.900	-51.5	-47.7	-51.0	-52.8	-1.8	13.9
2434.950	-51.5	-47.9	-51.0	-53.0	-2.0	13.7
2435.000	-51.5	-48.0	-51.0	-53.1	-2.1	13.6
2435.050	-51.5	-47.5	-51.0	-52.6	-1.6	14.1
2435.100	-51.5	-47.3	-51.0	-52.4	-1.4	14.3
2435.150	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2435.200	-51.5	-48.0	-51.0	-53.1	-2.1	13.6
2435.250	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2435.300	-51.5	-47.7	-51.0	-52.8	-1.8	13.9
2435.350	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2435.400	-51.5	-48.4	-51.0	-53.5	-2.5	13.2
2435.450	-51.5	-48.3	-51.0	-53.4	-2.4	13.3
2435.500	-51.5	-48.4	-51.0	-53.5	-2.5	13.2
2435.550	-51.5	-48.9	-51.0	-54.0	-3.0	12.7
2435.600	-51.5	-48.5	-51.0	-53.6	-2.6	13.1
2435.650	-51.5	-48.1	-51.0	-53.2	-2.2	13.5
2435.700	-51.5	-48.5	-51.0	-53.6	-2.6	13.1
2435.750	-51.5	-48.0	-51.0	-53.1	-2.1	13.6
2435.800	-51.5	-48.0	-51.0	-53.1	-2.1	13.6
2435.850	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2435.900	-51.5	-47.8	-51.0	-52.9	-1.9	13.8
2435.950	-51.5	-47.7	-51.0	-52.8	-1.8	13.9
2436.000	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2436.050	-51.5	-47.3	-51.0	-52.4	-1.4	14.3
2436.100	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2436.150	-51.5	-47.3	-51.0	-52.4	-1.4	14.3
2436.200	-51.5	-47.8	-51.0	-52.9	-1.9	13.8
2436.250	-51.5	-48.1	-51.0	-53.2	-2.2	13.5
2436.300	-51.5	-48.3	-51.0	-53.4	-2.4	13.3
2436.350	-51.5	-48.1	-51.0	-53.2	-2.2	13.5
2436.400	-51.5	-48.3	-51.0	-53.4	-2.4	13.3
2436.450	-51.5	-48.4	-51.0	-53.5	-2.5	13.2
2436.500	-51.5	-48.8	-51.0	-53.9	-2.9	12.8
2436.550	-51.5	-49.2	-51.0	-54.3	-3.3	12.4
2436.600	-51.5	-48.9	-51.0	-54.0	-3.0	12.7
2436.650	-51.5	-48.9	-51.0	-54.0	-3.0	12.7
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2436.950	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
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2437.050	-51.5	-47.2	-51.0	-52.3	-1.3	14.4
2437.100	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2437.150	-51.5	-47.9	-51.0	-53.0	-2.0	13.7
2437.200	-51.5	-47.8	-51.0	-52.9	-1.9	13.8

2437.250	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2437.300	-51.5	-48.5	-51.0	-53.6	-2.6	13.1
2437.350	-51.5	-48.6	-51.0	-53.7	-2.7	13.0
2437.400	-51.5	-48.5	-51.0	-53.6	-2.6	13.1
2437.450	-51.5	-48.5	-51.0	-53.6	-2.6	13.1
2437.500	-51.5	-48.8	-51.0	-53.9	-2.9	12.8
2437.550	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2437.600	-51.5	-49.0	-51.0	-54.1	-3.1	12.6
2437.650	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2437.700	-51.5	-48.6	-51.0	-53.7	-2.7	13.0
2437.750	-51.5	-48.7	-51.0	-53.8	-2.8	12.9
2437.800	-51.5	-47.5	-51.0	-52.6	-1.6	14.1
2437.850	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2437.900	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2437.950	-51.5	-47.4	-51.0	-52.5	-1.5	14.2
2438.000	-51.5	-47.7	-51.0	-52.8	-1.8	13.9
2438.050	-51.5	-47.9	-51.0	-53.0	-2.0	13.7
2438.100	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2438.150	-51.5	-48.3	-51.0	-53.4	-2.4	13.3
2438.200	-51.5	-48.1	-51.0	-53.2	-2.2	13.5
2438.250	-51.5	-48.9	-51.0	-54.0	-3.0	12.7
2438.300	-51.5	-48.4	-51.0	-53.5	-2.5	13.2
2438.350	-51.5	-48.5	-51.0	-53.6	-2.6	13.1
2438.400	-51.5	-48.5	-51.0	-53.6	-2.6	13.1
2438.450	-51.5	-48.6	-51.0	-53.7	-2.7	13.0
2438.500	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2438.550	-51.5	-47.8	-51.0	-52.9	-1.9	13.8
2438.600	-51.5	-48.0	-51.0	-53.1	-2.1	13.6
2438.650	-51.5	-48.0	-51.0	-53.1	-2.1	13.6
2438.700	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2438.750	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2438.800	-51.5	-47.5	-51.0	-52.6	-1.6	14.1
2438.850	-51.5	-48.4	-51.0	-53.5	-2.5	13.2
2438.900	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2438.950	-51.5	-48.0	-51.0	-53.1	-2.1	13.6
2439.000	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2439.050	-51.5	-47.9	-51.0	-53.0	-2.0	13.7
2439.100	-51.5	-47.8	-51.0	-52.9	-1.9	13.8
2439.150	-51.5	-48.0	-51.0	-53.1	-2.1	13.6
2439.200	-51.5	-47.9	-51.0	-53.0	-2.0	13.7
2439.250	-51.5	-47.5	-51.0	-52.6	-1.6	14.1
2439.300	-51.5	-48.4	-51.0	-53.5	-2.5	13.2
2439.350	-51.5	-48.3	-51.0	-53.4	-2.4	13.3
2439.400	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2439.450	-51.5	-48.8	-51.0	-53.9	-2.9	12.8
2439.500	-51.5	-48.8	-51.0	-53.9	-2.9	12.8
2439.550	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2439.600	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2439.650	-51.5	-48.7	-51.0	-53.8	-2.8	12.9
2439.700	-51.5	-49.3	-51.0	-54.4	-3.4	12.3
2439.750	-51.5	-48.6	-51.0	-53.7	-2.7	13.0
2439.800	-51.5	-48.7	-51.0	-53.8	-2.8	12.9

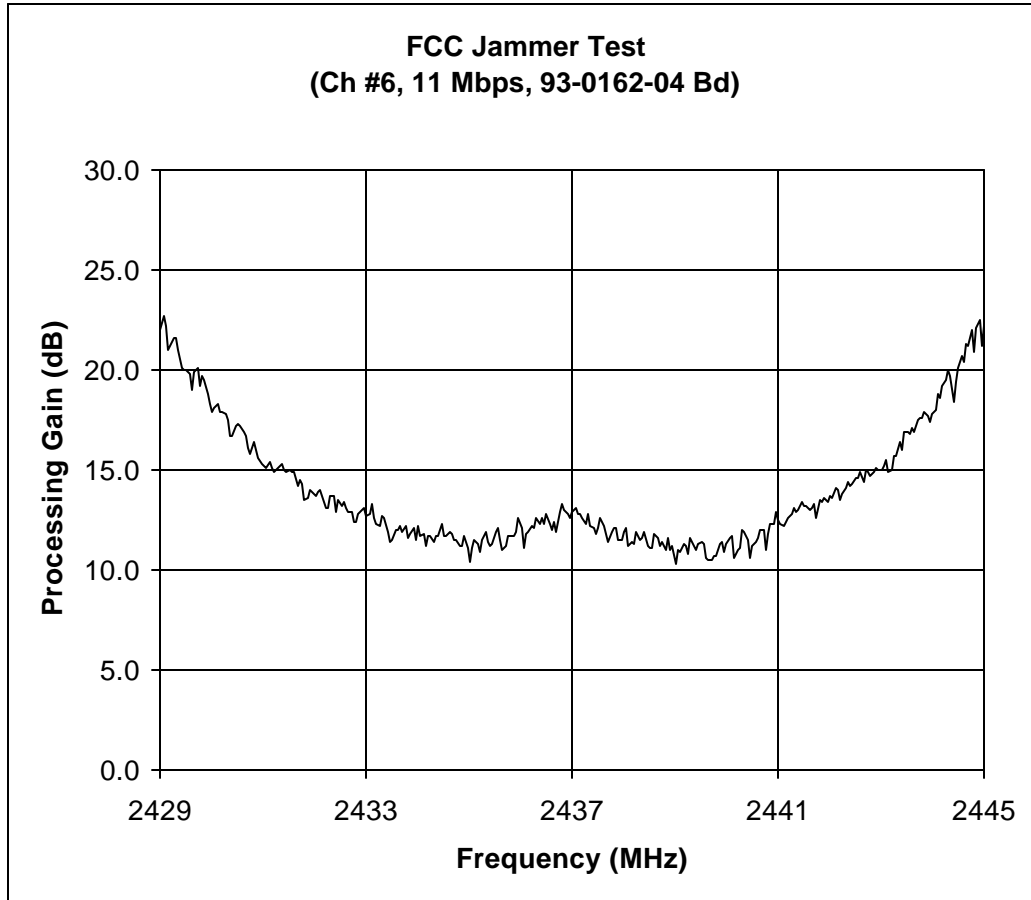


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2439.900	-51.5	-48.3	-51.0	-53.4	-2.4	13.3
2439.950	-51.5	-48.7	-51.0	-53.8	-2.8	12.9
2440.000	-51.5	-48.7	-51.0	-53.8	-2.8	12.9
2440.050	-51.5	-48.0	-51.0	-53.1	-2.1	13.6
2440.100	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2440.150	-51.5	-47.9	-51.0	-53.0	-2.0	13.7
2440.200	-51.5	-47.9	-51.0	-53.0	-2.0	13.7
2440.250	-51.5	-48.0	-51.0	-53.1	-2.1	13.6
2440.300	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2440.350	-51.5	-48.4	-51.0	-53.5	-2.5	13.2
2440.400	-51.5	-47.4	-51.0	-52.5	-1.5	14.2
2440.450	-51.5	-47.8	-51.0	-52.9	-1.9	13.8
2440.500	-51.5	-47.0	-51.0	-52.1	-1.1	14.6
2440.550	-51.5	-47.0	-51.0	-52.1	-1.1	14.6
2440.600	-51.5	-46.8	-51.0	-51.9	-0.9	14.8
2440.650	-51.5	-47.0	-51.0	-52.1	-1.1	14.6
2440.700	-51.5	-47.4	-51.0	-52.5	-1.5	14.2
2440.750	-51.5	-47.7	-51.0	-52.8	-1.8	13.9
2440.800	-51.5	-47.6	-51.0	-52.7	-1.7	14.0
2440.850	-51.5	-47.1	-51.0	-52.2	-1.2	14.5
2440.900	-51.5	-47.4	-51.0	-52.5	-1.5	14.2
2440.950	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2441.000	-51.5	-48.2	-51.0	-53.3	-2.3	13.4
2441.050	-51.5	-47.3	-51.0	-52.4	-1.4	14.3
2441.100	-51.5	-47.3	-51.0	-52.4	-1.4	14.3
2441.150	-51.5	-47.5	-51.0	-52.6	-1.6	14.1
2441.200	-51.5	-47.4	-51.0	-52.5	-1.5	14.2
2441.250	-51.5	-47.3	-51.0	-52.4	-1.4	14.3
2441.300	-51.5	-46.5	-51.0	-51.6	-0.6	15.1
2441.350	-51.5	-46.0	-51.0	-51.1	-0.1	15.6
2441.400	-51.5	-46.2	-51.0	-51.3	-0.3	15.4
2441.450	-51.5	-46.4	-51.0	-51.5	-0.5	15.2
2441.500	-51.5	-46.2	-51.0	-51.3	-0.3	15.4
2441.550	-51.5	-45.6	-51.0	-50.7	0.3	16.0
2441.600	-51.5	-45.7	-51.0	-50.8	0.2	15.9
2441.650	-51.5	-46.0	-51.0	-51.1	-0.1	15.6
2441.700	-51.5	-45.9	-51.0	-51.0	0.0	15.7
2441.750	-51.5	-46.8	-51.0	-51.9	-0.9	14.8
2441.800	-51.5	-46.5	-51.0	-51.6	-0.6	15.1
2441.850	-51.5	-46.2	-51.0	-51.3	-0.3	15.4
2441.900	-51.5	-46.0	-51.0	-51.1	-0.1	15.6
2441.950	-51.5	-46.6	-51.0	-51.7	-0.7	15.0
2442.000	-51.5	-46.6	-51.0	-51.7	-0.7	15.0
2442.050	-51.5	-46.2	-51.0	-51.3	-0.3	15.4
2442.100	-51.5	-45.4	-51.0	-50.5	0.5	16.2
2442.150	-51.5	-45.5	-51.0	-50.6	0.4	16.1
2442.200	-51.5	-45.2	-51.0	-50.3	0.7	16.4
2442.250	-51.5	-45.0	-51.0	-50.1	0.9	16.6
2442.300	-51.5	-44.0	-51.0	-49.1	1.9	17.6
2442.350	-51.5	-43.9	-51.0	-49.0	2.0	17.7
2442.400	-51.5	-44.0	-51.0	-49.1	1.9	17.6

2442.450	-51.5	-43.7	-51.0	-48.8	2.2	17.9
2442.500	-51.5	-44.3	-51.0	-49.4	1.6	17.3
2442.550	-51.5	-43.8	-51.0	-48.9	2.1	17.8
2442.600	-51.5	-44.4	-51.0	-49.5	1.5	17.2
2442.650	-51.5	-44.0	-51.0	-49.1	1.9	17.6
2442.700	-51.5	-44.3	-51.0	-49.4	1.6	17.3
2442.750	-51.5	-44.8	-51.0	-49.9	1.1	16.8
2442.800	-51.5	-44.9	-51.0	-50.0	1.0	16.7
2442.850	-51.5	-44.7	-51.0	-49.8	1.2	16.9
2442.900	-51.5	-45.0	-51.0	-50.1	0.9	16.6
2442.950	-51.5	-45.5	-51.0	-50.6	0.4	16.1
2443.000	-51.5	-45.2	-51.0	-50.3	0.7	16.4
2443.050	-51.5	-44.9	-51.0	-50.0	1.0	16.7
2443.100	-51.5	-44.0	-51.0	-49.1	1.9	17.6
2443.150	-51.5	-44.2	-51.0	-49.3	1.7	17.4
2443.200	-51.5	-44.4	-51.0	-49.5	1.5	17.2
2443.250	-51.5	-43.9	-51.0	-49.0	2.0	17.7
2443.300	-51.5	-43.2	-51.0	-48.3	2.7	18.4
2443.350	-51.5	-44.0	-51.0	-49.1	1.9	17.6
2443.400	-51.5	-41.9	-51.0	-47.0	4.0	19.7
2443.450	-51.5	-43.1	-51.0	-48.2	2.8	18.5
2443.500	-51.5	-43.2	-51.0	-48.3	2.7	18.4
2443.550	-51.5	-43.0	-51.0	-48.1	2.9	18.6
2443.600	-51.5	-42.9	-51.0	-48.0	3.0	18.7
2443.650	-51.5	-42.8	-51.0	-47.9	3.1	18.8
2443.700	-51.5	-43.0	-51.0	-48.1	2.9	18.6
2443.750	-51.5	-43.9	-51.0	-49.0	2.0	17.7
2443.800	-51.5	-43.1	-51.0	-48.2	2.8	18.5
2443.850	-51.5	-42.5	-51.0	-47.6	3.4	19.1
2443.900	-51.5	-42.9	-51.0	-48.0	3.0	18.7
2443.950	-51.5	-43.8	-51.0	-48.9	2.1	17.8
2444.000	-51.5	-43.9	-51.0	-49.0	2.0	17.7
2444.050	-51.5	-42.4	-51.0	-47.5	3.5	19.2
2444.100	-51.5	-41.5	-51.0	-46.6	4.4	20.1
2444.150	-51.5	-41.7	-51.0	-46.8	4.2	19.9
2444.200	-51.5	-42.0	-51.0	-47.1	3.9	19.6
2444.250	-51.5	-42.1	-51.0	-47.2	3.8	19.5
2444.300	-51.5	-41.9	-51.0	-47.0	4.0	19.7
2444.350	-51.5	-40.9	-51.0	-46.0	5.0	20.7
2444.400	-51.5	-40.8	-51.0	-45.9	5.1	20.8
2444.450	-51.5	-40.7	-51.0	-45.8	5.2	20.9
2444.500	-51.5	-40.6	-51.0	-45.7	5.3	21.0
2444.550	-51.5	-40.5	-51.0	-45.6	5.4	21.1
2444.600	-51.5	-40.3	-51.0	-45.4	5.6	21.3
2444.650	-51.5	-40.7	-51.0	-45.8	5.2	20.9
2444.700	-51.5	-40.5	-51.0	-45.6	5.4	21.1
2444.750	-51.5	-40.2	-51.0	-45.3	5.7	21.4
2444.800	-51.5	-40.1	-51.0	-45.2	5.8	21.5
2444.850	-51.5	-40.1	-51.0	-45.2	5.8	21.5
2444.900	-51.5	-40.5	-51.0	-45.6	5.4	21.1
2444.950	-51.5	-40.9	-51.0	-46.0	5.0	20.7
2445.000	-51.5	-41.0	-51.0	-46.1	4.9	20.6

Appendix D: Measured Data Ch #6 11 Mb/s

(S/N)<sub>o</sub> = 17.0 dB  
 M<sub>j</sub> = -7.5 dB @ 20th Percentile  
 L<sub>sys</sub> = 2 dB  
 G<sub>p</sub> = 11.5 dB



610030698, Auto, simplex measurement, 162-04 xmtr. 11Mb/s, Estimated BER s/w

Freq	Raw XMIT RF Level	Raw S.G. RF Level	Corrected XMIT RF Level	Corrected S.G. RF Level	M <sub>j</sub> = J/S	G <sub>p</sub> = (S/N) <sub>o</sub> + M <sub>j</sub> + L <sub>sys</sub>
2429.000	-51.8	-42.9	-51.0	-48.0	3.0	22.0
2429.050	-51.8	-42.2	-51.0	-47.3	3.7	22.7
2429.100	-51.8	-42.7	-51.0	-47.8	3.2	22.2
2429.150	-51.8	-43.9	-51.0	-49.0	2.0	21.0
2429.200	-51.8	-43.5	-51.0	-48.6	2.4	21.4
2429.250	-51.8	-43.3	-51.0	-48.4	2.6	21.6
2429.300	-51.8	-43.3	-51.0	-48.4	2.6	21.6
2429.350	-51.8	-43.9	-51.0	-49.0	2.0	21.0
2429.400	-51.8	-44.8	-51.0	-49.9	1.1	20.1

2429.450	-51.8	-44.9	-51.0	-50.0	1.0	20.0
2429.500	-51.8	-44.9	-51.0	-50.0	1.0	20.0
2429.550	-51.8	-45.1	-51.0	-50.2	0.8	19.8
2429.600	-51.8	-45.9	-51.0	-51.0	0.0	19.0
2429.650	-51.8	-45.0	-51.0	-50.1	0.9	19.9
2429.700	-51.8	-44.8	-51.0	-49.9	1.1	20.1
2429.750	-51.8	-45.7	-51.0	-50.8	0.2	19.2
2429.800	-51.8	-45.2	-51.0	-50.3	0.7	19.7
2429.850	-51.8	-45.4	-51.0	-50.5	0.5	19.5
2429.900	-51.8	-46.1	-51.0	-51.2	-0.2	18.8
2429.950	-51.8	-46.6	-51.0	-51.7	-0.7	18.3
2430.000	-51.8	-47.0	-51.0	-52.1	-1.1	17.9
2430.050	-51.8	-46.8	-51.0	-51.9	-0.9	18.1
2430.100	-51.8	-46.6	-51.0	-51.7	-0.7	18.3
2430.150	-51.8	-47.0	-51.0	-52.1	-1.1	17.9
2430.200	-51.8	-47.0	-51.0	-52.1	-1.1	17.9
2430.250	-51.8	-47.1	-51.0	-52.2	-1.2	17.8
2430.300	-51.8	-47.4	-51.0	-52.5	-1.5	17.5
2430.350	-51.8	-48.2	-51.0	-53.3	-2.3	16.7
2430.400	-51.8	-48.2	-51.0	-53.3	-2.3	16.7
2430.450	-51.8	-47.7	-51.0	-52.8	-1.8	17.2
2430.500	-51.8	-47.6	-51.0	-52.7	-1.7	17.3
2430.550	-51.8	-47.7	-51.0	-52.8	-1.8	17.2
2430.600	-51.8	-48.0	-51.0	-53.1	-2.1	16.9
2430.650	-51.8	-48.2	-51.0	-53.3	-2.3	16.7
2430.700	-51.8	-48.8	-51.0	-53.9	-2.9	16.1
2430.750	-51.8	-49.1	-51.0	-54.2	-3.2	15.8
2430.800	-51.8	-48.5	-51.0	-53.6	-2.6	16.4
2430.850	-51.8	-48.9	-51.0	-54.0	-3.0	16.0
2430.900	-51.8	-49.3	-51.0	-54.4	-3.4	15.6
2430.950	-51.8	-49.6	-51.0	-54.7	-3.7	15.3
2431.000	-51.8	-49.7	-51.0	-54.8	-3.8	15.2
2431.050	-51.8	-49.8	-51.0	-54.9	-3.9	15.1
2431.100	-51.8	-49.5	-51.0	-54.6	-3.6	15.4
2431.150	-51.8	-49.8	-51.0	-54.9	-3.9	15.1
2431.200	-51.8	-50.0	-51.0	-55.1	-4.1	14.9
2431.250	-51.8	-49.9	-51.0	-55.0	-4.0	15.0
2431.300	-51.8	-49.7	-51.0	-54.8	-3.8	15.2
2431.350	-51.8	-49.6	-51.0	-54.7	-3.7	15.3
2431.400	-51.8	-49.9	-51.0	-55.0	-4.0	15.0
2431.450	-51.8	-50.0	-51.0	-55.1	-4.1	14.9
2431.500	-51.8	-49.9	-51.0	-55.0	-4.0	15.0
2431.550	-51.8	-50.0	-51.0	-55.1	-4.1	14.9
2431.600	-51.8	-50.0	-51.0	-55.1	-4.1	14.9
2431.650	-51.8	-50.7	-51.0	-55.8	-4.8	14.2
2431.700	-51.8	-50.4	-51.0	-55.5	-4.5	14.5
2431.750	-51.8	-50.6	-51.0	-55.7	-4.7	14.3
2431.800	-51.8	-51.4	-51.0	-56.5	-5.5	13.5
2431.850	-51.8	-51.3	-51.0	-56.4	-5.4	13.6
2431.900	-51.8	-50.9	-51.0	-56.0	-5.0	14.0
2431.950	-51.8	-51.0	-51.0	-56.1	-5.1	13.9
2432.000	-51.8	-51.2	-51.0	-56.3	-5.3	13.7

2432.050	-51.8	-51.0	-51.0	-56.1	-5.1	13.9
2432.100	-51.8	-50.9	-51.0	-56.0	-5.0	14.0
2432.150	-51.8	-51.5	-51.0	-56.6	-5.6	13.4
2432.200	-51.8	-51.8	-51.0	-56.9	-5.9	13.1
2432.250	-51.8	-51.8	-51.0	-56.9	-5.9	13.1
2432.300	-51.8	-51.2	-51.0	-56.3	-5.3	13.7
2432.350	-51.8	-51.2	-51.0	-56.3	-5.3	13.7
2432.400	-51.8	-52.0	-51.0	-57.1	-6.1	12.9
2432.450	-51.8	-51.4	-51.0	-56.5	-5.5	13.5
2432.500	-51.8	-51.7	-51.0	-56.8	-5.8	13.2
2432.550	-51.8	-51.5	-51.0	-56.6	-5.6	13.4
2432.600	-51.8	-51.8	-51.0	-56.9	-5.9	13.1
2432.650	-51.8	-52.0	-51.0	-57.1	-6.1	12.9
2432.700	-51.8	-52.0	-51.0	-57.1	-6.1	12.9
2432.750	-51.8	-52.5	-51.0	-57.6	-6.6	12.4
2432.800	-51.8	-52.5	-51.0	-57.6	-6.6	12.4
2432.850	-51.8	-52.1	-51.0	-57.2	-6.2	12.8
2432.900	-51.8	-51.9	-51.0	-57.0	-6.0	13.0
2432.950	-51.8	-51.8	-51.0	-56.9	-5.9	13.1
2433.000	-51.8	-52.2	-51.0	-57.3	-6.3	12.7
2433.050	-51.8	-52.1	-51.0	-57.2	-6.2	12.8
2433.100	-51.8	-51.6	-51.0	-56.7	-5.7	13.3
2433.150	-51.8	-52.3	-51.0	-57.4	-6.4	12.6
2433.200	-51.8	-52.6	-51.0	-57.7	-6.7	12.3
2433.250	-51.8	-52.7	-51.0	-57.8	-6.8	12.2
2433.300	-51.8	-52.2	-51.0	-57.3	-6.3	12.7
2433.350	-51.8	-52.3	-51.0	-57.4	-6.4	12.6
2433.400	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2433.450	-51.8	-53.5	-51.0	-58.6	-7.6	11.4
2433.500	-51.8	-53.4	-51.0	-58.5	-7.5	11.5
2433.550	-51.8	-52.9	-51.0	-58.0	-7.0	12.0
2433.600	-51.8	-52.9	-51.0	-58.0	-7.0	12.0
2433.650	-51.8	-52.7	-51.0	-57.8	-6.8	12.2
2433.700	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2433.750	-51.8	-52.7	-51.0	-57.8	-6.8	12.2
2433.800	-51.8	-53.3	-51.0	-58.4	-7.4	11.6
2433.850	-51.8	-53.1	-51.0	-58.2	-7.2	11.8
2433.900	-51.8	-52.8	-51.0	-57.9	-6.9	12.1
2433.950	-51.8	-53.4	-51.0	-58.5	-7.5	11.5
2434.000	-51.8	-52.7	-51.0	-57.8	-6.8	12.2
2434.050	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2434.100	-51.8	-53.1	-51.0	-58.2	-7.2	11.8
2434.150	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2434.200	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2434.250	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2434.300	-51.8	-53.5	-51.0	-58.6	-7.6	11.4
2434.350	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2434.400	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2434.450	-51.8	-52.6	-51.0	-57.7	-6.7	12.3
2434.500	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2434.550	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2434.600	-51.8	-53.0	-51.0	-58.1	-7.1	11.9

2434.650	-51.8	-53.1	-51.0	-58.2	-7.2	11.8
2434.700	-51.8	-53.4	-51.0	-58.5	-7.5	11.5
2434.750	-51.8	-53.4	-51.0	-58.5	-7.5	11.5
2434.800	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2434.850	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2434.900	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2434.950	-51.8	-53.8	-51.0	-58.9	-7.9	11.1
2435.000	-51.8	-54.5	-51.0	-59.6	-8.6	10.4
2435.050	-51.8	-53.8	-51.0	-58.9	-7.9	11.1
2435.100	-51.8	-53.4	-51.0	-58.5	-7.5	11.5
2435.150	-51.8	-53.6	-51.0	-58.7	-7.7	11.3
2435.200	-51.8	-54.0	-51.0	-59.1	-8.1	10.9
2435.250	-51.8	-53.4	-51.0	-58.5	-7.5	11.5
2435.300	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2435.350	-51.8	-53.5	-51.0	-58.6	-7.6	11.4
2435.400	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2435.450	-51.8	-53.6	-51.0	-58.7	-7.7	11.3
2435.500	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2435.550	-51.8	-52.8	-51.0	-57.9	-6.9	12.1
2435.600	-51.8	-53.4	-51.0	-58.5	-7.5	11.5
2435.650	-51.8	-53.9	-51.0	-59.0	-8.0	11.0
2435.700	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2435.750	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2435.800	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2435.850	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2435.900	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2435.950	-51.8	-52.3	-51.0	-57.4	-6.4	12.6
2436.000	-51.8	-52.8	-51.0	-57.9	-6.9	12.1
2436.050	-51.8	-53.8	-51.0	-58.9	-7.9	11.1
2436.100	-51.8	-53.1	-51.0	-58.2	-7.2	11.8
2436.150	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2436.200	-51.8	-52.7	-51.0	-57.8	-6.8	12.2
2436.250	-51.8	-52.8	-51.0	-57.9	-6.9	12.1
2436.300	-51.8	-52.3	-51.0	-57.4	-6.4	12.6
2436.350	-51.8	-52.6	-51.0	-57.7	-6.7	12.3
2436.400	-51.8	-52.3	-51.0	-57.4	-6.4	12.6
2436.450	-51.8	-52.6	-51.0	-57.7	-6.7	12.3
2436.500	-51.8	-52.1	-51.0	-57.2	-6.2	12.8
2436.550	-51.8	-52.6	-51.0	-57.7	-6.7	12.3
2436.600	-51.8	-52.9	-51.0	-58.0	-7.0	12.0
2436.650	-51.8	-52.5	-51.0	-57.6	-6.6	12.4
2436.700	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2436.750	-51.8	-52.0	-51.0	-57.1	-6.1	12.9
2436.800	-51.8	-51.6	-51.0	-56.7	-5.7	13.3
2436.850	-51.8	-51.9	-51.0	-57.0	-6.0	13.0
2436.900	-51.8	-52.1	-51.0	-57.2	-6.2	12.8
2436.950	-51.8	-52.3	-51.0	-57.4	-6.4	12.6
2437.000	-51.8	-52.0	-51.0	-57.1	-6.1	12.9
2437.050	-51.8	-51.8	-51.0	-56.9	-5.9	13.1
2437.100	-51.8	-52.1	-51.0	-57.2	-6.2	12.8
2437.150	-51.8	-52.1	-51.0	-57.2	-6.2	12.8
2437.200	-51.8	-52.3	-51.0	-57.4	-6.4	12.6

2437.250	-51.8	-52.6	-51.0	-57.7	-6.7	12.3
2437.300	-51.8	-52.1	-51.0	-57.2	-6.2	12.8
2437.350	-51.8	-52.7	-51.0	-57.8	-6.8	12.2
2437.400	-51.8	-52.8	-51.0	-57.9	-6.9	12.1
2437.450	-51.8	-53.1	-51.0	-58.2	-7.2	11.8
2437.500	-51.8	-52.8	-51.0	-57.9	-6.9	12.1
2437.550	-51.8	-52.3	-51.0	-57.4	-6.4	12.6
2437.600	-51.8	-52.7	-51.0	-57.8	-6.8	12.2
2437.650	-51.8	-53.1	-51.0	-58.2	-7.2	11.8
2437.700	-51.8	-53.5	-51.0	-58.6	-7.6	11.4
2437.750	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2437.800	-51.8	-52.8	-51.0	-57.9	-6.9	12.1
2437.850	-51.8	-52.8	-51.0	-57.9	-6.9	12.1
2437.900	-51.8	-53.4	-51.0	-58.5	-7.5	11.5
2437.950	-51.8	-53.4	-51.0	-58.5	-7.5	11.5
2438.000	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2438.050	-51.8	-52.8	-51.0	-57.9	-6.9	12.1
2438.100	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2438.150	-51.8	-53.5	-51.0	-58.6	-7.6	11.4
2438.200	-51.8	-53.6	-51.0	-58.7	-7.7	11.3
2438.250	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2438.300	-51.8	-53.4	-51.0	-58.5	-7.5	11.5
2438.350	-51.8	-53.3	-51.0	-58.4	-7.4	11.6
2438.400	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2438.450	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2438.500	-51.8	-53.8	-51.0	-58.9	-7.9	11.1
2438.550	-51.8	-53.8	-51.0	-58.9	-7.9	11.1
2438.600	-51.8	-53.1	-51.0	-58.2	-7.2	11.8
2438.650	-51.8	-53.3	-51.0	-58.4	-7.4	11.6
2438.700	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2438.750	-51.8	-53.5	-51.0	-58.6	-7.6	11.4
2438.800	-51.8	-53.9	-51.0	-59.0	-8.0	11.0
2438.850	-51.8	-53.3	-51.0	-58.4	-7.4	11.6
2438.900	-51.8	-53.9	-51.0	-59.0	-8.0	11.0
2438.950	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2439.000	-51.8	-54.6	-51.0	-59.7	-8.7	10.3
2439.050	-51.8	-53.9	-51.0	-59.0	-8.0	11.0
2439.100	-51.8	-54.0	-51.0	-59.1	-8.1	10.9
2439.150	-51.8	-53.6	-51.0	-58.7	-7.7	11.3
2439.200	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2439.250	-51.8	-54.1	-51.0	-59.2	-8.2	10.8
2439.300	-51.8	-53.3	-51.0	-58.4	-7.4	11.6
2439.350	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2439.400	-51.8	-53.9	-51.0	-59.0	-8.0	11.0
2439.450	-51.8	-53.6	-51.0	-58.7	-7.7	11.3
2439.500	-51.8	-53.5	-51.0	-58.6	-7.6	11.4
2439.550	-51.8	-53.6	-51.0	-58.7	-7.7	11.3
2439.600	-51.8	-54.3	-51.0	-59.4	-8.4	10.6
2439.650	-51.8	-54.4	-51.0	-59.5	-8.5	10.5
2439.700	-51.8	-54.4	-51.0	-59.5	-8.5	10.5
2439.750	-51.8	-54.2	-51.0	-59.3	-8.3	10.7
2439.800	-51.8	-54.2	-51.0	-59.3	-8.3	10.7

2439.850	-51.8	-53.6	-51.0	-58.7	-7.7	11.3
2439.900	-51.8	-53.5	-51.0	-58.6	-7.6	11.4
2439.950	-51.8	-54.0	-51.0	-59.1	-8.1	10.9
2440.000	-51.8	-53.6	-51.0	-58.7	-7.7	11.3
2440.050	-51.8	-53.3	-51.0	-58.4	-7.4	11.6
2440.100	-51.8	-53.2	-51.0	-58.3	-7.3	11.7
2440.150	-51.8	-54.3	-51.0	-59.4	-8.4	10.6
2440.200	-51.8	-53.9	-51.0	-59.0	-8.0	11.0
2440.250	-51.8	-53.8	-51.0	-58.9	-7.9	11.1
2440.300	-51.8	-52.9	-51.0	-58.0	-7.0	12.0
2440.350	-51.8	-53.0	-51.0	-58.1	-7.1	11.9
2440.400	-51.8	-53.4	-51.0	-58.5	-7.5	11.5
2440.450	-51.8	-54.3	-51.0	-59.4	-8.4	10.6
2440.500	-51.8	-53.7	-51.0	-58.8	-7.8	11.2
2440.550	-51.8	-53.5	-51.0	-58.6	-7.6	11.4
2440.600	-51.8	-53.3	-51.0	-58.4	-7.4	11.6
2440.650	-51.8	-52.9	-51.0	-58.0	-7.0	12.0
2440.700	-51.8	-52.9	-51.0	-58.0	-7.0	12.0
2440.750	-51.8	-53.9	-51.0	-59.0	-8.0	11.0
2440.800	-51.8	-53.1	-51.0	-58.2	-7.2	11.8
2440.850	-51.8	-52.6	-51.0	-57.7	-6.7	12.3
2440.900	-51.8	-52.6	-51.0	-57.7	-6.7	12.3
2440.950	-51.8	-52.0	-51.0	-57.1	-6.1	12.9
2441.000	-51.8	-52.4	-51.0	-57.5	-6.5	12.5
2441.050	-51.8	-52.6	-51.0	-57.7	-6.7	12.3
2441.100	-51.8	-52.7	-51.0	-57.8	-6.8	12.2
2441.150	-51.8	-52.5	-51.0	-57.6	-6.6	12.4
2441.200	-51.8	-52.3	-51.0	-57.4	-6.4	12.6
2441.250	-51.8	-52.1	-51.0	-57.2	-6.2	12.8
2441.300	-51.8	-51.8	-51.0	-56.9	-5.9	13.1
2441.350	-51.8	-52.0	-51.0	-57.1	-6.1	12.9
2441.400	-51.8	-51.9	-51.0	-57.0	-6.0	13.0
2441.450	-51.8	-51.5	-51.0	-56.6	-5.6	13.4
2441.500	-51.8	-51.7	-51.0	-56.8	-5.8	13.2
2441.550	-51.8	-51.7	-51.0	-56.8	-5.8	13.2
2441.600	-51.8	-51.9	-51.0	-57.0	-6.0	13.0
2441.650	-51.8	-51.8	-51.0	-56.9	-5.9	13.1
2441.700	-51.8	-51.6	-51.0	-56.7	-5.7	13.3
2441.750	-51.8	-52.3	-51.0	-57.4	-6.4	12.6
2441.800	-51.8	-51.4	-51.0	-56.5	-5.5	13.5
2441.850	-51.8	-51.5	-51.0	-56.6	-5.6	13.4
2441.900	-51.8	-51.3	-51.0	-56.4	-5.4	13.6
2441.950	-51.8	-51.5	-51.0	-56.6	-5.6	13.4
2442.000	-51.8	-51.2	-51.0	-56.3	-5.3	13.7
2442.050	-51.8	-51.3	-51.0	-56.4	-5.4	13.6
2442.100	-51.8	-50.8	-51.0	-55.9	-4.9	14.1
2442.150	-51.8	-50.9	-51.0	-56.0	-5.0	14.0
2442.200	-51.8	-51.4	-51.0	-56.5	-5.5	13.5
2442.250	-51.8	-51.1	-51.0	-56.2	-5.2	13.8
2442.300	-51.8	-50.8	-51.0	-55.9	-4.9	14.1
2442.350	-51.8	-50.5	-51.0	-55.6	-4.6	14.4
2442.400	-51.8	-50.7	-51.0	-55.8	-4.8	14.2



2442.450	-51.8	-50.6	-51.0	-55.7	-4.7	14.3
2442.500	-51.8	-50.3	-51.0	-55.4	-4.4	14.6
2442.550	-51.8	-50.3	-51.0	-55.4	-4.4	14.6
2442.600	-51.8	-50.0	-51.0	-55.1	-4.1	14.9
2442.650	-51.8	-50.5	-51.0	-55.6	-4.6	14.4
2442.700	-51.8	-49.9	-51.0	-55.0	-4.0	15.0
2442.750	-51.8	-50.0	-51.0	-55.1	-4.1	14.9
2442.800	-51.8	-50.2	-51.0	-55.3	-4.3	14.7
2442.850	-51.8	-50.0	-51.0	-55.1	-4.1	14.9
2442.900	-51.8	-49.8	-51.0	-54.9	-3.9	15.1
2442.950	-51.8	-49.9	-51.0	-55.0	-4.0	15.0
2443.000	-51.8	-49.9	-51.0	-55.0	-4.0	15.0
2443.050	-51.8	-49.7	-51.0	-54.8	-3.8	15.2
2443.100	-51.8	-49.4	-51.0	-54.5	-3.5	15.5
2443.150	-51.8	-50.0	-51.0	-55.1	-4.1	14.9
2443.200	-51.8	-49.9	-51.0	-55.0	-4.0	15.0
2443.250	-51.8	-49.2	-51.0	-54.3	-3.3	15.7
2443.300	-51.8	-49.2	-51.0	-54.3	-3.3	15.7
2443.350	-51.8	-48.5	-51.0	-53.6	-2.6	16.4
2443.400	-51.8	-48.9	-51.0	-54.0	-3.0	16.0
2443.450	-51.8	-48.0	-51.0	-53.1	-2.1	16.9
2443.500	-51.8	-48.0	-51.0	-53.1	-2.1	16.9
2443.550	-51.8	-48.1	-51.0	-53.2	-2.2	16.8
2443.600	-51.8	-47.8	-51.0	-52.9	-1.9	17.1
2443.650	-51.8	-48.0	-51.0	-53.1	-2.1	16.9
2443.700	-51.8	-47.4	-51.0	-52.5	-1.5	17.5
2443.750	-51.8	-47.3	-51.0	-52.4	-1.4	17.6
2443.800	-51.8	-47.3	-51.0	-52.4	-1.4	17.6
2443.850	-51.8	-47.0	-51.0	-52.1	-1.1	17.9
2443.900	-51.8	-47.2	-51.0	-52.3	-1.3	17.7
2443.950	-51.8	-47.5	-51.0	-52.6	-1.6	17.4
2444.000	-51.8	-47.1	-51.0	-52.2	-1.2	17.8
2444.050	-51.8	-46.9	-51.0	-52.0	-1.0	18.0
2444.100	-51.8	-46.1	-51.0	-51.2	-0.2	18.8
2444.150	-51.8	-46.3	-51.0	-51.4	-0.4	18.6
2444.200	-51.8	-45.7	-51.0	-50.8	0.2	19.2
2444.250	-51.8	-45.4	-51.0	-50.5	0.5	19.5
2444.300	-51.8	-44.9	-51.0	-50.0	1.0	20.0
2444.350	-51.8	-45.2	-51.0	-50.3	0.7	19.7
2444.400	-51.8	-46.5	-51.0	-51.6	-0.6	18.4
2444.450	-51.8	-45.5	-51.0	-50.6	0.4	19.4
2444.500	-51.8	-44.8	-51.0	-49.9	1.1	20.1
2444.550	-51.8	-44.2	-51.0	-49.3	1.7	20.7
2444.600	-51.8	-44.5	-51.0	-49.6	1.4	20.4
2444.650	-51.8	-43.6	-51.0	-48.7	2.3	21.3
2444.700	-51.8	-43.7	-51.0	-48.8	2.2	21.2
2444.750	-51.8	-42.9	-51.0	-48.0	3.0	22.0
2444.800	-51.8	-44.0	-51.0	-49.1	1.9	20.9
2444.850	-51.8	-42.8	-51.0	-47.9	3.1	22.1
2444.900	-51.8	-42.4	-51.0	-47.5	3.5	22.5
2444.950	-51.8	-43.7	-51.0	-48.8	2.2	21.2
2445.000	-51.8	-42.7	-51.0	-47.8	3.2	22.2

## Appendix E: Calibration Measurement

### Test Transmitter

Rate	Average Output Power	Duty Cycle	Packet Output Power
1 Mb/s	-51.1 dBm	98.3%	-51.0 dBm
2 Mb/s	-51.2 dBm	96.9%	-51.1 dBm
5.5 Mb/s	-51.5 dBm	88.9%	-51.0 dBm
11 Mb/s	-51.8 dBm	83.3%	-51.0 dBm

### RF Signal Generator

Generator Level = -40.0 dBm

Measured Level = -45.1 dBm

Cal Factor = -5.1

## Appendix F: Converting between Bit Error Rate and Packet Error Rate

The Intersil (S/N)<sub>o</sub> values used in this test are based on a Bit Error Rate (BER) value of  $10^{-5}$ . To determine the Packet Error Rate (PER) which would result from this BER, the following is used:

PER	probability of a packet being in error
1-PER	probability of the packet being correct
BER	probability of a bit being in error
1-BER	probability of the bit being correct
$(1-BER)^n$	probability of all n bits in the packet being correct

Set the two equations for the packet being correct equal to one another, and solve for the PER:

$$1-PER = (1-BER)^n \Rightarrow PER = 1-(1-BER)^n$$

For the packets used in test code, the packet size is 3312 bits. So for a BER of  $10^{-5}$ , the PER is approximately:

$$PER = 1-(1-10^{-5})^{3312} \cong 3.2\%$$